Feb 58

RAILROAD

MAGAZINE | FEBRUARY 50c

Will "Piggyback" Make the Boxcar Obsolete? by Freeman Hubbard

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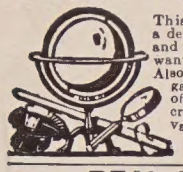

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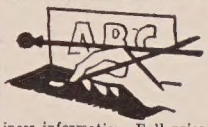

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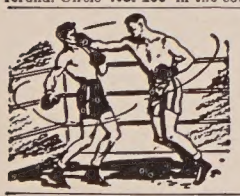

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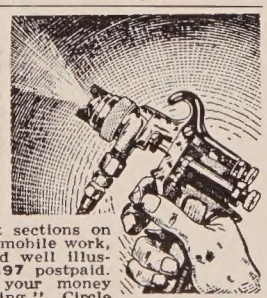

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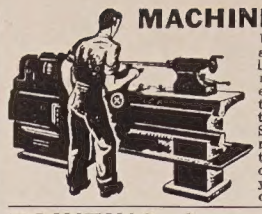

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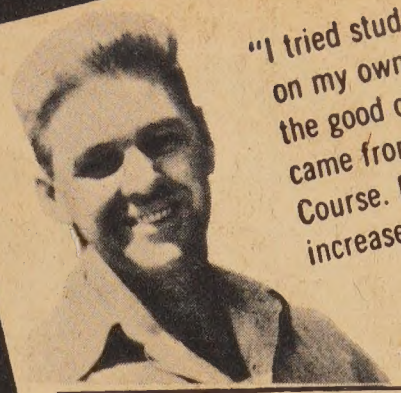

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VOL. 69, NO. 2 FEBRUARY 1958 50 CENTS

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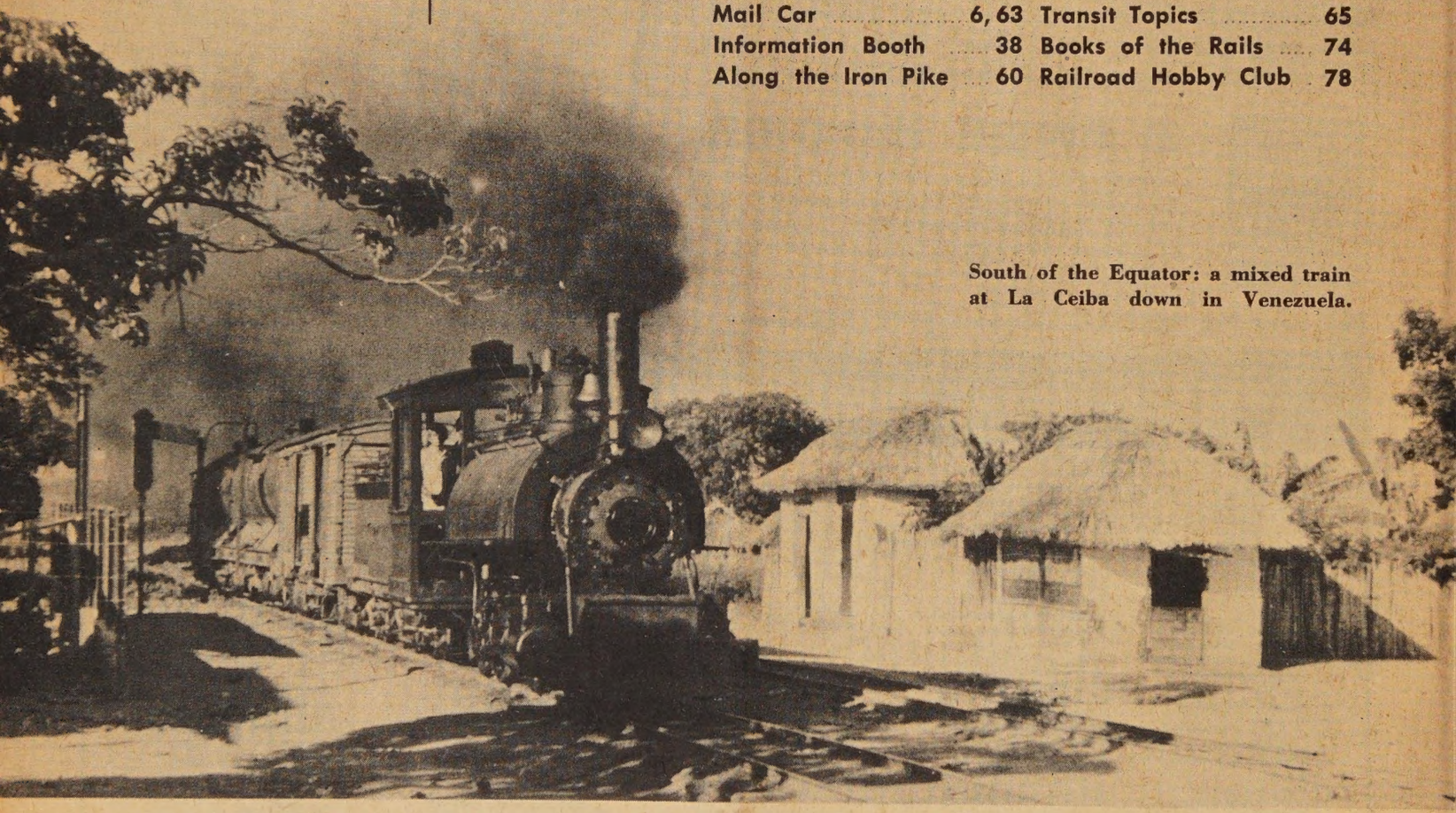

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A distinguished automotive engineer recently said "the auto industry is now short 100,000 mechanics." He added that a reliable home study school, such as CTI, can be "of enormous help" to the ambitious man in getting started. The demand for skilled men is great because there are over 60 million cars and trucks on the road, with one-third in the heavy-repair class. Also, about 7 million new vehicles are produced each year. No wonder that repair shops are jammed with cars that need work! No wonder that auto mechanics are so well paid!

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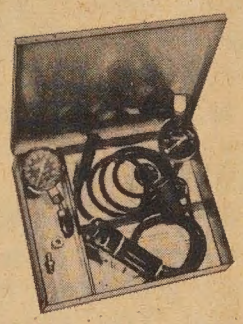
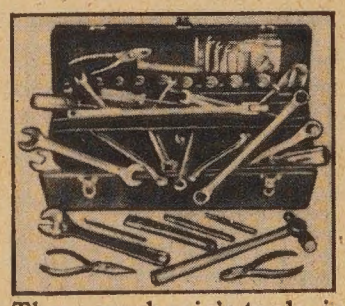


Learn Faster, Get Valuable Experience by Practicing with Tune-Up Kit, Tools

Let CTI train you at home. No need to quit your job to attend a resident school. CTI training was developed in the shop—it's practical, easy to understand. You even get tune-up instruments and tools so you can practice. *Mail coupon for facts.*

Engine Tune-Up Kit Is a CTI "First"

Here are instruments that skilled mechanics use to locate engine troubles. Kit includes Compression Tester; Vacuum Gauge and Fuel Pump Tester; Ignition Timing Light; portable steel case.



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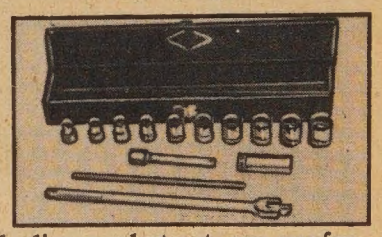

These mechanic's tools, including socket set, are professional in quality. They keep your interest high, help you get useful practice and experience.

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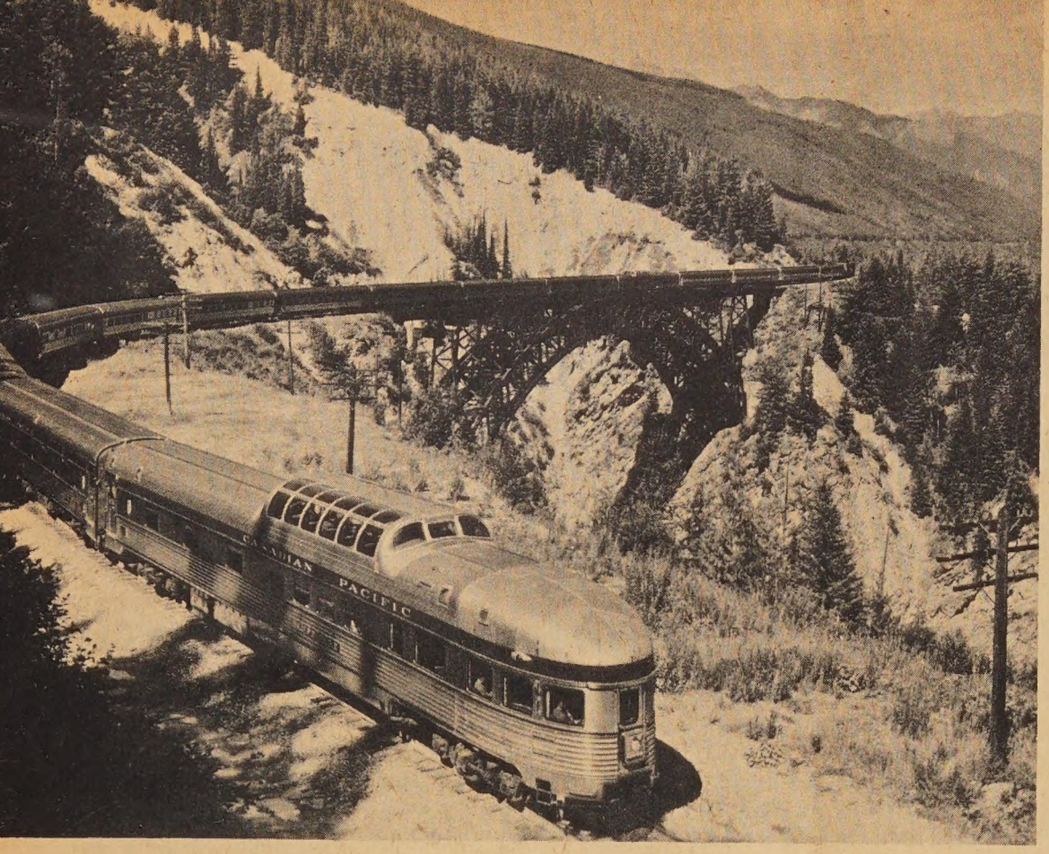

Canadian Pacific Railway

While its transcontinental passengers relax to tape-recorded music, *The Canadian* crosses Stoney Creek on Canadian Pacific's highest bridge, in the Rockies.

HAYWIRE MAC'S swan song, "Boomers and Their Women" (Dec. issue), was "his last and one of his best contributions to railroadiana," according to Charles B. Gordon, himself an oldtime boomer, 4461 Edgewood Pl., Riverside, Calif., whose portrait shows what he looked like when he was young.

Charles B. Gordon

"Mac's final story recalls some incidents that came to my attention long ago. Around 1907 a girl telegrapher named 'Texas Bill' was pounding brass for the Pennsy near Pittsburgh when she fell for a Casanova working an adjacent wire trick. The poor girl became pregnant, but the man fled to a more salubrious clime and their baby died unborn.

"Another sordid affair occurred in 1912 when I was in Bessemer & Lake Erie train service. It concerned a waitress named Josephine and a redheaded brakeman. The situation became too hot for Red to handle and he pulled the pin on her. Hysterical Josephine took poison, but prompt medical attention saved her life.

"Even more tragic was the case of a Union Pacific brakeman whom I knew at Las Vegas, Nevada, about 15 years ago. I think he went out of his mind when he saw his wife talking to a 17-year-old calloby, and he made some wild charges. Then he shot and killed them both and committed suicide.

"But don't let these three incidents prejudice you against boomers in general. I have known a great many who were happily married. Like Haywire Mac, I wandered far from one railroad job to another. It all began Jan. 7, 1898, when I was nearly 15 years old but managed to convince a brass hat that I was 18, as a result of which I secured a station-helper job paying $30 a month on the B&O's Pittsburgh Division.

"Two years later I went firing and was promoted to the right-hand side in 1902, but quit engine service when my arm was injured in a B&O derailment which killed my conductor and head brakeman. After that I drifted into and out of jobs on 21 other roads, working as operator, train dispatcher, night chief, etc., including a summer in train service. I had been railroading for 51 years and 11 months when I retired in 1949." ●

APROPOS of "Boomers and Their Women," these remarks come from Bill Knapke, retired Southern Pacific conductor, Orinda, Calif.

"A bunch of engineers talking on a street corner got around to the subject of yanking the whistle cord one way or another to let their wives know they'd soon be home. One of them said:

" 'Me, I don't whistle at all. I shut off at the mileboard and drift in as quiet as I can. Then I borrow the head brakeman's brake club, slip home, and lean it beside the back door. Going to the front door, I knock loudly. Then I run around to the rear—and there hasn't been a single sonuvabitch got away from me yet!' "

Three brakemen stand high in Bill's memory. "When I was rutting the Imperial Valley local freight," he muses, "my brakemen included Burt W. Mitchell, George Donnatin, and Ralph Heistand. Many years later those three retired, Burt as division superintendent, George as superintendent of terminals, and Ralph as general yardmaster, all on the SP's Los Angeles Division. Did any other conductor have three brakemen who became officials on the same division?" ●

OUR cover painting by Hardie Gramatky is based on the theme: "Tonnage returns to the rails. The growing trend to 'piggyback' reflects the progressive methods railroads are using in their efforts to meet increasing competition." This bright midwinter picture appears by courtesy of American Brake Shoe Co., which manufactures such products as cast-iron brake shoes, journal bearings, lubricating pads designed to avoid hotboxes, freight-car wheels, crossing frogs and switches, track hold-down devices, and snow blowers, to mention only a few. ●

TAPE-RECORDED music to ease jangled nerves and make business dealings more pleasant has long been popular in chain stores, restaurants, and factories. Last summer the world's only air-conditioned trolley car, the *Silver Sightseer* at Washington, D. C., began lulling its passengers with semi-classical

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harmony. You'll find the same trend in the railroad industry, not only on luxury trains but also in big stations, ticket offices, dining areas, and some general offices.

Most of this "canned" music comes from one source, the Muzak Corporation of New York City. Among the roads using this service on "name" trains are the Atlantic Coast Line, B&O, Canadian Pacific, Great Northern, Kansas City Southern, New York Central, Northern Pacific, Pennsy, Santa Fe, and Union Pacific.

Programs are tailored to fit various needs. For example, the GN, the NP, and the UP prefer Western tunes, while the ACL, which caters largely to New Yorkers, concentrates on music slanted to New York audiences such as Hit Parade and Broadway show melodies.

The New Haven, the New York Central, and the Pennsy make a point of supplying music to some office employes engaged in such irksome jobs as accounting, timekeeping, etc. The Canadian Pacific, which put Canada's first scenic-dome cars into operation on the *Canadian* two years ago, establishing the world's longest dome-car ride, set another precedent the other day by introducing tape-recorded music into all parts of this train that are used by the public. Similar service was installed on the CPR *Dominion*.

Passengers in the privacy of their sleeping-car space may decide whether to relax with or without music by a single twist of a switch.

Of course, music is not played continuously aboard trains. Long-haul travelers, as a rule, like periods of quiet for mid-morning and mid-afternoon naps, so the music is silenced at appropriate times. The Santa Fe, which has 50-odd trains fitted with musical systems, uses different programs for luncheon and dinner, besides a third program of popular tunes and a fourth of semi-classicals.

No railroad pipes vocal music to its passengers. None uses rock and roll or jazz or loud brassy numbers, the idea being that music helps to combat travel fatigue or boredom.

Music in passenger-train service is not new. The Norfolk & Western, the ACL, and the Santa Fe have been using it on name trains since 1950. Within the past two years the practice has taken a big jump in popularity because of the changeover from wire recordings to tape recordings, which tends to eliminate distracting sounds and improve tone quality.

What does train music cost? That depends upon what type service is used. The Northern Pacific, for example, pays as much as $16,000 per train for such installation, plus $85 monthly for tape rental, $400 for monthly maintenance labor, and $35 for maintenance materials.

The question arises: Why would a railroad plow additional cost into its already debt-laden passenger business? A Pennsy spokesman says cautiously: "Insofar as the music in the *Broadway Limited* diners helps to maintain our service on a par with the better-class hotels and restaurants, it is probably worthwhile." ●

HOW do oldtimers feel about steam locomotives? Listen to D. Stewart Baals, 104 Lycane Rd., Bellefonte, Ashland, Ky., who has been in Chesapeake & Ohio engine service for 50 years.

D. Stewart Baals

"Since I was promoted to engineer in 1910," he writes, "I have run practically every class of power the C&O had, including all 90 engines in the K4-2700 Class. My favorites were Nos. 2725, 2726, and 2727. Just after the builders delivered the 2727 to us at Ashland I ran her on a maiden trip. Since then I handled her often—until the diesels put her out of service.

"This engine had a soul. She was more alive than a big chunk of metal. Many a night I would run her on manifest or time freight, with 100 to 150 loads behind her, stepping through the dark countryside while the rest of the world seemed to be asleep. Her stack crackled like a machine-gun. Her headlight bored a hole in the night, the signals coming up green. I would lean out the cab window and listen to her talk in a language that only she and I could understand.

"The retirement of No. 2727 saddened me, but I was relieved when they sent her to the Museum of Transport at St. Louis instead of the scrap pile. If I am ever fortunate enough to visit St. Louis I will look up my old friend and sit on the engineer's seat once more. Most people who gaze at her standing there, alone and cold, probably do not realize how much life and power she once had." ●

RUBY VIRDEN, with a neighbor's boy, was picking rocks out of the alfalfa field on her father's ranch beside the Colorado River near Bond, Colo., at 5:25 p.m. the other day when she heard a loud crash coming from the Denver & Rio Grande Western tracks on the far side of the turbulent river. Ruby ran back to the house and told her father: "Daddy, there's a big slide on the railroad! Do something quick!"

Ruby Virden

"Slats" Virden got into his car and rapidly crossed the bridge to the single-track main line. There at milepost 132.50 he found the curving rails blocked by six huge boulders weighing, he estimated, 150 tons. The impact had not broken the signal circuit, and the block showed clear. Expecting a freight to be heading westward from Bond at about that time, Ruby's father drove toward the village. Halfway there, he saw the train emerge from a tunnel. Instantly he got out of the car, stood beside the track, and waved frantically. The train, a 99-car freight making 40 miles per hour, did not acknowledge his warning but kept on going. For several tense moments Slats did not know whether or not the engine crew had seen his signal. Finally they stopped, and the crew realized that Mr. Virden had saved more than dollars. As the Rio Grande *Green Light* puts it, they were thinking about human lives—their own. ●

FLAGSTOPS. Our assistant editor, Anne Williams, is known as "the standard-gage girl" becsause her height is exactly 5 feet 8½ inches, the same as the railroad gage.

The ICC has authorized St. Francois County Railroad in Missouri to abandon its entire line, 11 miles.

A major cause of railroad crossing accidents is that most warning signals are built too close to crossings and do not permit the motorist to stop in time at modern highway speeds, according to a new book, *The Night-time Acci-*

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If you have longed for the prestige and financial independence of YOUR OWN business, you can now realize this desire . . . if you can qualify for a Duraclean dealership. We are now enlarging this 27-year-old chain of independently-owned service dealerships which has rapidly grown to a world-wide service.

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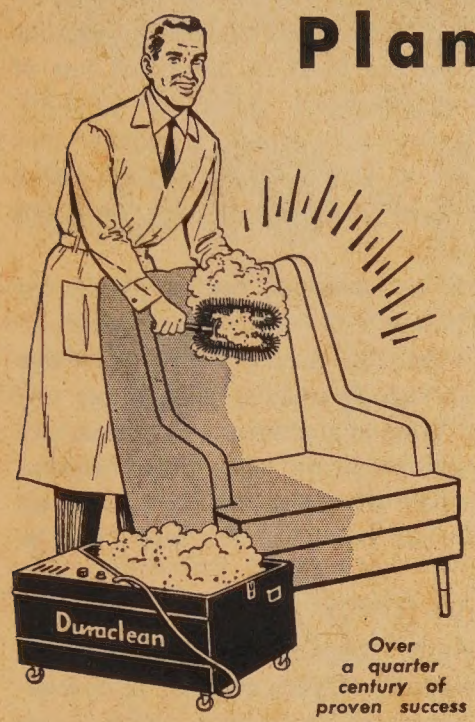
This is a sound, lifetime business that grows from REPEAT ORDERS and customer RECOMMENDATIONS. Alert dealers can gross an hourly profit of $5.00 on own service plus **$3.00 on EACH serviceman** at National Price Guide charges.



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Demonstrations win new customers. Men with **DURACLEAN** Dealerships find REPEAT and VOLUNTARY orders become a major source of income. Customers are not merely satisfied—many are enthused with results and tell their friends and neighbors. Furniture and department stores and interior decorators turn over cleaning and moth-proofing to **DURACLEAN** Dealers. We show you **27 ways** to get **new** customers.

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W. Abbott: In the past seven months I have taken in over $12,000 cleaning auto interiors.

R. N. Ritter: I seldom go under $200.00 per week by myself.

W. A. Lookiebill: We've had 20 years of pleasant dealings. I'm 65 but am setting my sights for 20 more years.

P. Friedinger: 70% of our business is repeat . . . also get business from reference of satisfied customers.

Earl Davis: Our sales increased $17,660 this year over last.

Leroy Ellsworth: Your advertising program certainly paid dividends for me.

M. Lassanske: My original investment was returned in about two months.

C. L. Smith: Again 1 day's work, 8 hrs. totaling over $100.00 for my helper and I isn't bad for a country boy like me. I do not have any unusual abilities: only this, I'm equipped with the best cleaning service in the field and get well paid for my work.

R. E. Schenck: The customers I had on House & Garden ads were very pleased. Their furnishings came out beautiful.

R. Kimbrough: Finished First White House of Confederacy and am to Duraclean the Governor's Mansion.

L. B. Hayes: During my first month I grossed $770.17.

T. Komori (Japan): We have 1,000,000 yen contract Duracleaning for U. S. Army.

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dent Problem, published by Pageant Press. The author is phil Hirsch.

Rejecting a Maine Central bid for control of the St. Johnsbury & Lamoille County RR. in Vermont, the ICC authorized Murray M. Salzberg & Associates of New York to take over. This group plans to rehabilitate the line and keep it running.

Last summer the D&RGW Durango-Silverton narrow-gage, operated by steam power, carried 24,672 passengers, 827 more than in the summer of '56, reports C. T. Steeb, 615 8th Ave., San Diego, Calif.

The birthplace of railroading in New Jersey was honored at Bordentown, N. J., the other day by the dedication of an unusual mid-city park which includes part of an historic stone arch bridge spanning the right-of-way of the old Camden & Amboy (now Pennsy). There America's oldest extant locomotive, the *John Bull,* made its first passenger-carrying run in 1831. The *John Bull,* first engine to have a "cowacatcher," is now in the Smithsonian Institution, Washington, D. C.

Tracks magazine tells of a Chesapeake & Ohio dog named Rusty that works all three shifts at the Main Street Terminal in Charlottesville, Va., inspecting 14 passenger trains a day and sleeping on a rug in the telegraph office. One brass pounder, Bill Files, is treasurer of the fund that provides for Rusty's licenses, tags, vet fees, and food. Another, Charlie Morris, maintains the dog's larder and acts as legal guardian.

A roving "schoolhouse" is operated by and for Wabash employes—firemen aspiring to win promotion as engineers and hoggers wanting to learn more about their jobs. It is a rebuilt car furnished by the company and fitted with special equipment. Classes are taught by an employe-paid traveling teacher. The pupils buy their own books and attend on their own time.

New York Central has adopted an assembly-line technique for repairing damaged freight cars, known as the "progressive spot" system, at its new $10½ million Frontier Yard in Buffalo. It operates on the principle of bringing the car to the worker instead of the worker to the car. Thus far it has increased the work crews' daily output nearly 50 percent.

The famous Kinzua Viaduct will be scrapped if the Erie wins its appeal to the ICC. This spidery structure was the world's highest and longest wrought-iron bridge when built in 1882. It was rebuilt of steel in 1900. It takes the Erie's rails across the deep gorge cut through Pennsylvania landscape by Kinzua Creek just north of Mount Jewett. The Erie wants to give up 14 miles of track, including the viaduct, and use the 29-mile double-tracked B&O line between Mount Jewett and Limestone, N. Y. ●

MEMORIES of circus trains he fired or pulled on the New Haven pervade George W. Prance, 25 Lincoln Ave., Plainville, Mass., chairman of the New England Association, Brotherhood of Locomotive Engineers. "One drizzly night we were hauling the entire John Robinson Circus on one train from Providence to Willimantic with a small ten-wheeler, No. 969. We ran smoothly in Rhode Island until we hit the 17-mile hill from Natick to Summit near the Connecticut border. There the elephants stalled us by swaying in unison in their car. We had to cut off the train and double the hill, but we finally made it to Willimantic without further incident."

Today, no North American circus rides the rails, but ten complete carnivals still travel in their own railroad cars. Frank Norton, electrician for one of the carnivals, revises Bob Staats' list (Oct. issue) to read: James E. Strates Shows, 50 cars; Royal American Shows, 40 to 50; World of Mirth Shows, 30 to 35; Cetlin & Wilson Shows, 30; Olson Shows (ex-Henis Bros.), 30; Foley & Bunke Shows, 25 to 30; Bill Harnes Shows, 20 to 25; (in Canada) Conklin Shows, Wallace Bros. Shows, and Model Shows of Canada. ●

NINETY-FOUR YEARS OLD last June 27th and still getting a big kick out of life. That's Jake Posey, Huntington, Calif., who spent 57 years with circuses.

"During all that time," he recalls, "I experienced only one train wreck and that was with Barnum & Bailey in Germany on July 6, 1901. Our train had four sections. The first three arrived in the Buethen yards. I was asleep in my bunk in the second section when the third section, consisting of stock cars, pulled in and tied up on a dead-end track against a brick warehouse and the brakeman failed to close the switch.

"The fourth section, all sleeping cars, entered the open switch and plowed into the third section. The engineer must have been dozing. He held a regular passenger run and had signed up for the circus train that night at the end of his regular run. Anyhow, he disappeared immediately after the wreck. I don't know what happened to him.

"At that time I was boss hostler. Two men and fifty horses, some of them rosinbacks (used by bareback riders), died in the shambles. It was pathetic. Those poor beasts were mangled so badly and whined so pitifully that I handed one of the canvasmen a hammer and told him to knock them on the head to put them out of their misery.

"During my career I worked for Barnum & Bailey, Buffalo Bill's Wild West Show, Adam Forepaugh, and Sells Brothers.

"We ate most of our meals in the cook-tent on the lot. There were no diners on the trains, but a 'privilege car' served doughnuts and coffee. At night, after the show was loaded, we were given a warm supper, and on Sunday when the show was traveling all day we ate on board the train." ●

A RETIRED HOGGER, "Carload Andy" Ospring, 1322 N. Ontario St., Burbank, Calif., tells us that *Railroad Magazine* "gave me a hobby which seems to have taken 25 years off my age (69 last August 7th)." He goes on: "I have joined several railfan clubs and collected quite a library of railroad books, especially those dealing with the Vandalia, the road I used to work on, together with my father, 'Dutch Andy.'

"I would have hated to run one of those Mother Hubbard engines that H. L. Kelso wrote about in the October issue, and I couldn't have stood a boomer's life, even with all the glorification that writers like Haywire Mac and Bedwell wove around it." ●

CORNFIELD MEET. Two Pere Marquette passenger trains running at high speed met head-on at six p.m. the day after Christmas, 1907, about 15 miles east of Grand Rapids, Mich., killing 28 people.

"I remember it well," writes Dick Stelwagen, 4003 Rotman Ave., Houston, Texas. "I went to the scene as a volunteer rescuer on the second relief train and stayed there in zero weather,

(Continued on page 63)

1957 WINNER INDIANAPOLIS

SAM HANKS, famous race driver and mechanic says: "I'd like a NATIONAL SCHOOLS trained mechanic on my crew anytime! Any employer would!"

Few racing drivers are as qualified to advise future mechanics as Sam Hanks, who builds and repairs his own racing cars. He holds the American Closed Course record (182.554 m.p.h.) and a host of state and national titles, including the National Midget Championship in '49 and the National A.A.A. crown in '53. At Indianapolis, he placed third in '52 and '53 . . . last year, he was runner-up.

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Prove it to yourself, Men. National Schools of Los Angeles, a leader since 1905, brings its famous training shops into your home — gives you everything you need to make more money in today's big, opportunity filled Auto-Mechanics & Diesel industry.

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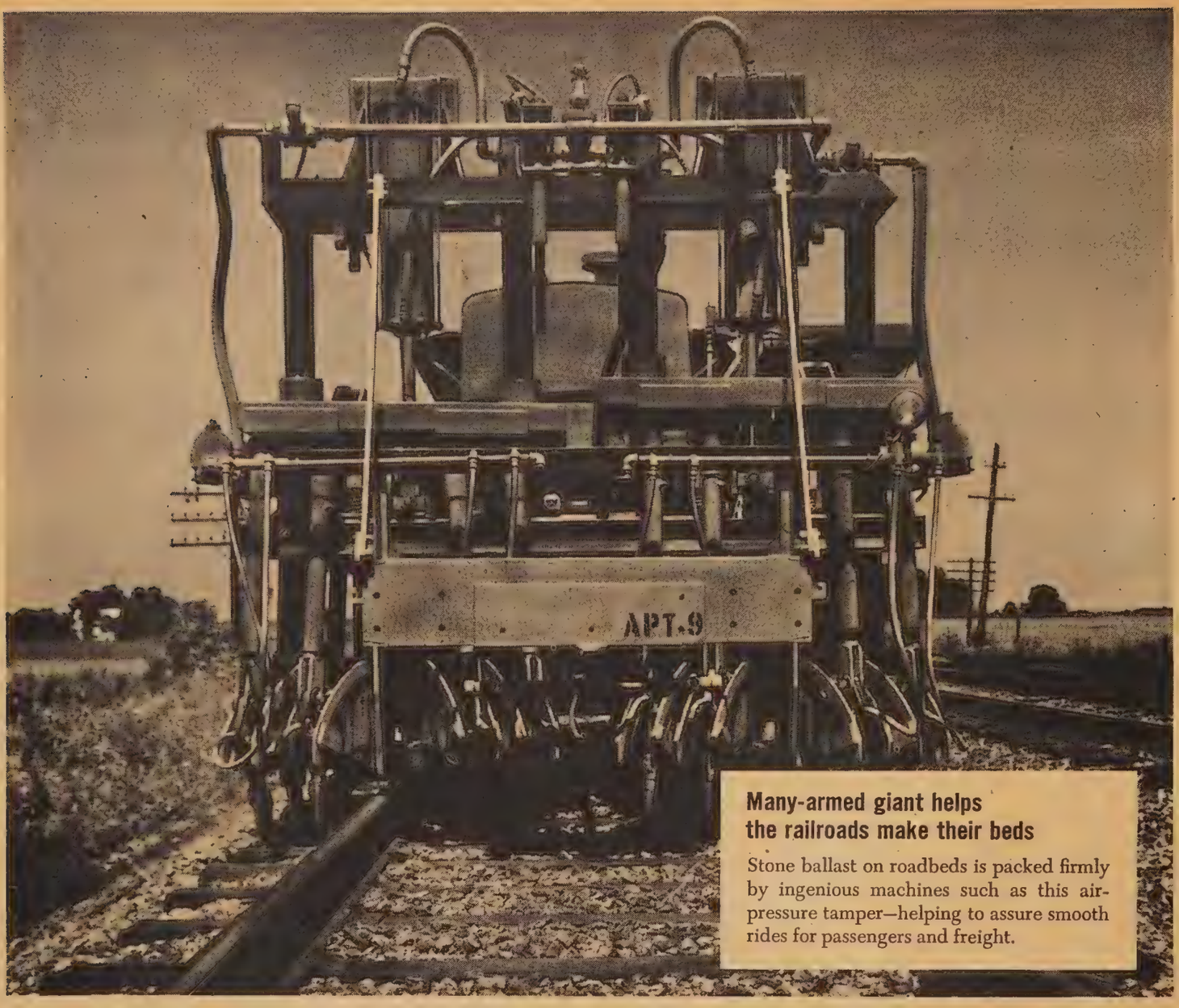


Many-armed giant helps the railroads make their beds

Stone ballast on roadbeds is packed firmly by ingenious machines such as this air-pressure tamper—helping to assure smooth rides for passengers and freight.

More Railroad Progress like this depends on adequate earnings

Isn't this common sense?

America's railroads have spent more than twelve billion dollars since World War II to improve their service — with new equipment, better roadway, new operating techniques.

These improvements are as important to America as to the railroads themselves. And the self-sustaining railroads are ready to make many more — as fast as they can earn the money to pay for them.

That's the hitch. Railroads just aren't earning enough money these days to put into operation all the improvements they have developed. Railroads *could* make enough money to do more of these things, for they are — by far — our most efficient system of mass transportation. But their earning power is hamstrung by outdated public policies that favor competing forms of transportation.

As a result, the railroads' earnings are reduced — and the nation loses some of the benefits of railroad progress. In your interest — in the interest of *every* American family — railroads should be permitted *equal* opportunity to earn an adequate return on their investment. *Isn't this common sense?*

AMERICA MOVES AHEAD WITH THE RAILROADS

Association of American Railroads, Washington, D. C.

YOUR BASIC TRANSPORTATION

Photos of the Month

British Railways, 9 Rockefeller Plaza, New York City

Latest addition to British Railways fleet of "name" trains, *The Caledonian* set a new speed record for regularly scheduled runs between London and Glasgow by covering the 401 miles in 387 minutes, with one stop. Normal fast time is 400 minutes. When the eight-coach luxury train began its first trip, a bagpiper and drum band at Euston station gave it sendoff with Scottish airs.

L. Wylie, Milwaukee Road

Electrically-driven snowplow is kept busy clearing a path for Milwaukee Road streamliners and freights in the high Cascades.

Have you ever seen Railway Post Office clerks at work? They begin sorting mail even before their train leaves the station and continue till their run ends. This Southern RPO is one of the 2,500 such cars that American Railways provide to help speed the delivery of mail by permitting the extensive sorting of letters, cards, etc., while they are rolling toward their destination.

Union Pacific "Big Boy" No. 4013, a simple articulated type built by Alco in 1941, on the turntable at Ogden, Utah.

Union Pacific Railroad

The man in an oval frame is fueling a diesel-electric locomotive at the Union Pacific Shops, Council Bluffs, Iowa.

the Pacific Story

by H. L. KELSO

DURING the steam age, when locomotive firemen got together at the end of their runs, often in the terminal washroom while scrubbing the sweaty coal grime off their hands and faces and necks, they usually headed for the nearest bistro to wet dusty throats with beer in a bull session.

After a day's work you had a lot of gripes and boasting to get off your chest. You also liked to talk about fast locomotives and fast women. This piece concerns the former. Haywire Mac covered the female angle rather well, I think, in the December *Railroad Magazine*.

A certain gabfest at Chicago comes to mind. I was then shoveling black diamonds for the Chicago & North Western and I swapped experiences with a Pennsy ashcat. Over a mug of suds he extolled the glories of K-4 Pacifics on his road.

"Pound for pound," he said, "no better engine ever latched onto a string of Pullmans."

As a rule, you quickly challenge such a claim. But I had stoked many Pacifics myself—good steamers, too—and I wanted to hear more about those on the Pennsy.

"I fired for a throttle artist," he said, lowering his voice confidentially, "who had a K-4 doing better than 125 miles per hour with eight cars tied to her tail! But the brass collars didn't know it. Given half a chance, we could make 150 with one of the new K-5's."

Thereupon I called his bluff. No steamer in all history has ever made 150 and probably none ever will. I told him also that the Omaha Road's Class R-3's were the heaviest and most powerful of all Pacifics. We had quite a wrangle. I pointed out that the North Western's 2900's had been kicking up a breeze since 1923.

But at that time, in the early thirties, I could not have foreseen what a featured role the great 2900's

Santa Fe *Grand Canyon Limited* doubleheads through Cajon Pass with a Pacific. type in the lead.
H. Sullivan, Placentia, Calif.

were destined to play in wheeling the *400* between Chicago and Minneapolis—400 miles in 400 minutes!

WHYTE'S standard classification lists the Pacific as a 4-6-2. She has a four-wheel leading truck, six coupled drivers, and a pair of trailing trucks directly under the cab. I'll never forget my introduction to this type. It was a cold winter's night, snowy and blowy, and I was a gawky, plain-faced kid of nineteen bucking the extra board on the Western Division of the Omaha Road at Sioux City. I had spent a few months breaking my back on yard goats but had never before worked on a high-wheeled passenger engine. You can imagine the butterflies in my innards when, without warning, I was called to fire No. 2, *The Nightingale.*

Well, sir, *The Nightingale* was in no mood for song. Two solid days and nights King Winter had been doing his damnedest to tie up traffic. Maintenance crews toiled like ants to keep the switches clear of snow and the dwarf signals visible. Officials bragged of their ability to run trains at all, without mentioning schedules.

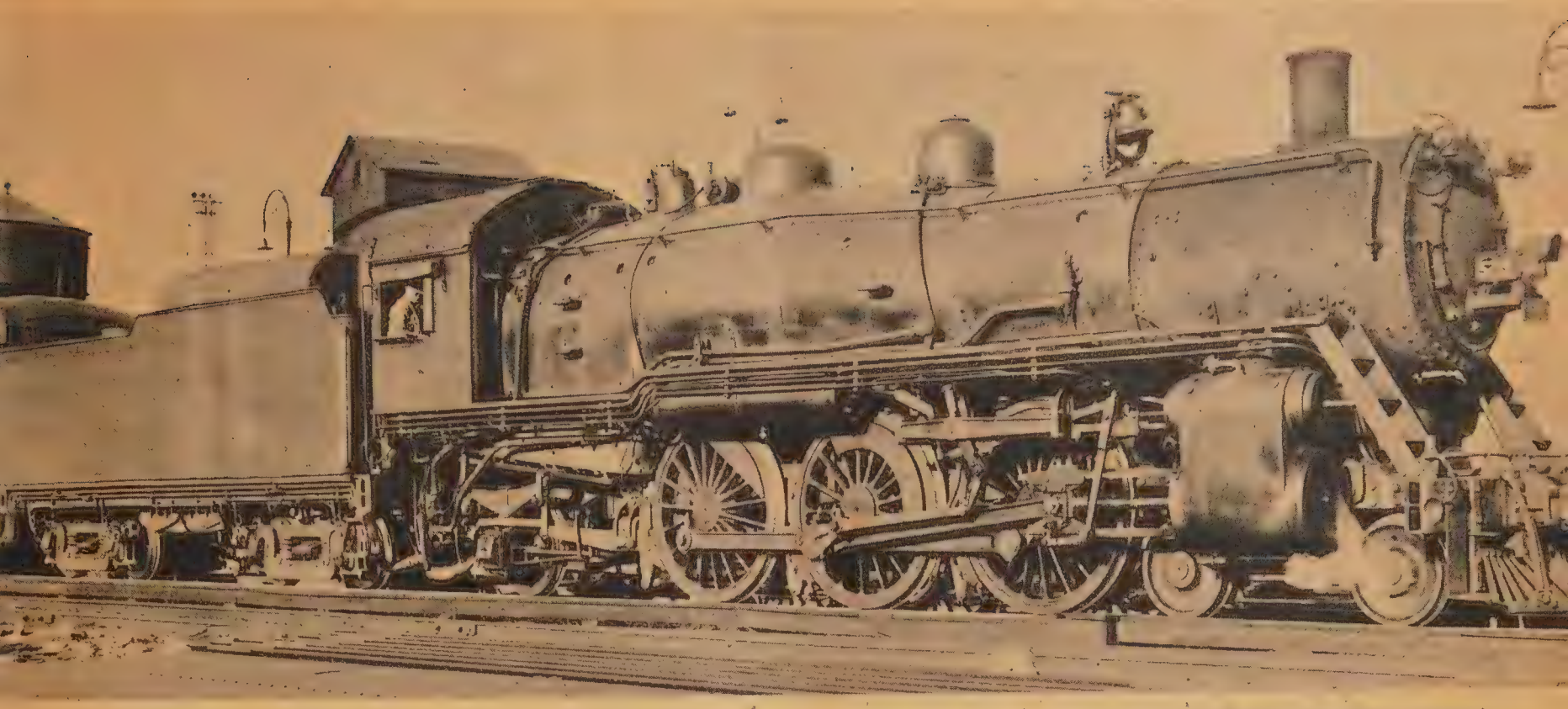
The North Western handled No. 2 from Omaha to Sioux City, where the Omaha Road picked her up for the rest of the way to Minneapolis. We were due to leave at twenty minutes past midnight, but because of the blizzard the North Western boys were two hours late pulling *The Nightingale* into Sioux City.

Engineer Ben Hammer thought that being third on the seniority list entitled him to a good fireman. When he saw me he lost his temper and phoned the roundhouse for a more experienced man. But help was scarce that miserable night. So Ben was stuck with me and I was stuck with a job I dreaded.

Our delay in pulling out of town didn't help matters any, and by the time we got under way both of us were practically nervous wrecks. Our train was heavy, with the dynamo in the car next to the engine, three or four coaches, and a string of all-steel Pullmans coupled to 371, the road's first Pacific.

Don Wood, 29 Mt. Haven Drive, Livingston, N. J.

After taking over the first section of a race-track express from a G-G1 at Rahway, No. 646, Class K-4s, proudly wearing Pennsy keystone, crosses Raritan River at South Amboy, N. J., en route to Monmouth Park via the New York & Long Branch.



Pacific type No. 5273 at East St. Louis, Ill., in 1939 on the old Alton (now part of the Gulf, Mobile & Ohio system).

The 371 was a saturated mill (*Sans* superheater), with 75-inch drivers, 21x28-inch cylinders, and a rated tractive effort of 27,988 pounds. Schenectady had built her in 1903. Her only claim to modernity was a firedoor which had a most annoying way of remaining open when it should have slammed shut after you tossed each scoop of coal into the firebox.

For the first 128 miles of our 148-mile run into St. James, a subdivision point on the white Minnesota prairie, I didn't once sit down on the seatbox but spaded fuel and traded water for steam like a fiend. Sometimes, when Ben managed to coax the train up to 50 miles per hour, I couldn't hit the firedoor. The ancient 371 would lurch to one side and I'd heave a scoop of coal right up into the hogger's lap—and did he take it kindly? *You* answer that one.

ANYHOW, we finally reached the terminal, thus ending my first job on a 4-6-2, and I gave a sigh of relief. But don't think that my remarks about old 371 refer to Pacifics in general. Quite the contrary. The 4-6-2's were—and are—among the finest engines ever built. In their prime they racked up some memorable speed and endurance records. Even today, with forty or more years of seniority, many Pacifics are still turning in more than a fair day's work.

The Pacific had the good points of the Ten-wheeler (4-6-0) and the Atlantic (4-4-2) but the disadvantages of neither. Besides being great passenger-haulers they could be adapted to all kinds of service and were so used long before the terms *dual-service, dual-purpose,* and *general-service* were applied to motive power.

In 1886 the very first 4-6-2 was designed by George Strong and built at the Lehigh Valley shops. Named the *Duplex,* she was strictly an experiment. Some authorities do not regard her as a true Pacific because of her Mother Hubbard cab and her two cylindrical, corrugated fireboxes in lieu of one standard firebox. But no less a locomotive historian than Paul T. Warner backs me up in saying the *Duplex* was the earliest Pacific, the first engine that actually required wheels to support her firebox.

Not until 1901 did a practical 4-6-2 appear. L. G. White, the New Zealand Railways' chief mechanical officer, who designed her in 1899, spent some months in persuading his nation's Railway Board to approve the blueprints of his dream-engine before the Board agreed to give the Baldwin Works in America a contract for building thirteen of them.

On January 4, 1902, the first of the thirteen went into service in New Zealand. Those engines are considered by many people to have been the first true Pacifics ever built. However, at that time they were not known as Pacifics.

News got around. Later that year the Missouri Pacific ordered the Brooks Works to build the first practical 4-6-2 for American use. As a result, the 4-6-2 became known as the Missouri Pacific type, shortened to Pacific type.

In no time at all the design took hold and the major locomotive builders began getting orders for this type. Alco outshopped two Pacifics for the Chesapeake & Ohio. Rogers rebuilt a 2-6-2 into a smart little Pacific for the Illinois Central and started tooling up for the flood of orders that was sure to follow.

Soon the new babies were rolling all over the country. The year 1903 saw Pacifics added to the rosters of the Santa Fe, the Northern Pacific, the Union Pacific, the Southern, the Rock Island, and my old alma mater, the Omaha Road. The New York

Central bought five from Schenectady and after exhaustive tests turned them over to the Boston & Albany. In 1908 the Central purchased some more Pacifics; this time to run on their own trackage.

From 1904 on, most American roads put 4-6-2's into service and the type grew bigger and somewhat better by the year, but it wasn't until 1910 that the Pacific really came into its own. In that year the Northern Pacific acquired a fleet of Class Q4's equipped with Schmidt superheaters, the first large installation of a successful superheater to be applied to motive power in the United States. So successful were the Q4's, due mainly to the superheaters, that thereafter relatively few Pacifics were built in this country without the new appliance.

THEN in July, 1911, the American Locomotive Company at Schenectady, N. Y., trotted out the most widely publicized 4-6-2 of all time. She was Alco's 50,000th locomotive and in honor of the occasion received that number. The 50,000 was built as a demonstrator, at the builder's expense. Designed by F. J. Cole, Alco's chief mechanical engineer, as the last word in passenger power, she was destined to spend nearly forty years in active service, every mile of it pulling passenger trains.

For fifteen months the mighty iron horse was put through tests on various roads, including trips with the Central's *20th Century Limited*. The only complaint ever registered against her alleged that she was too heavy for some roadbeds.

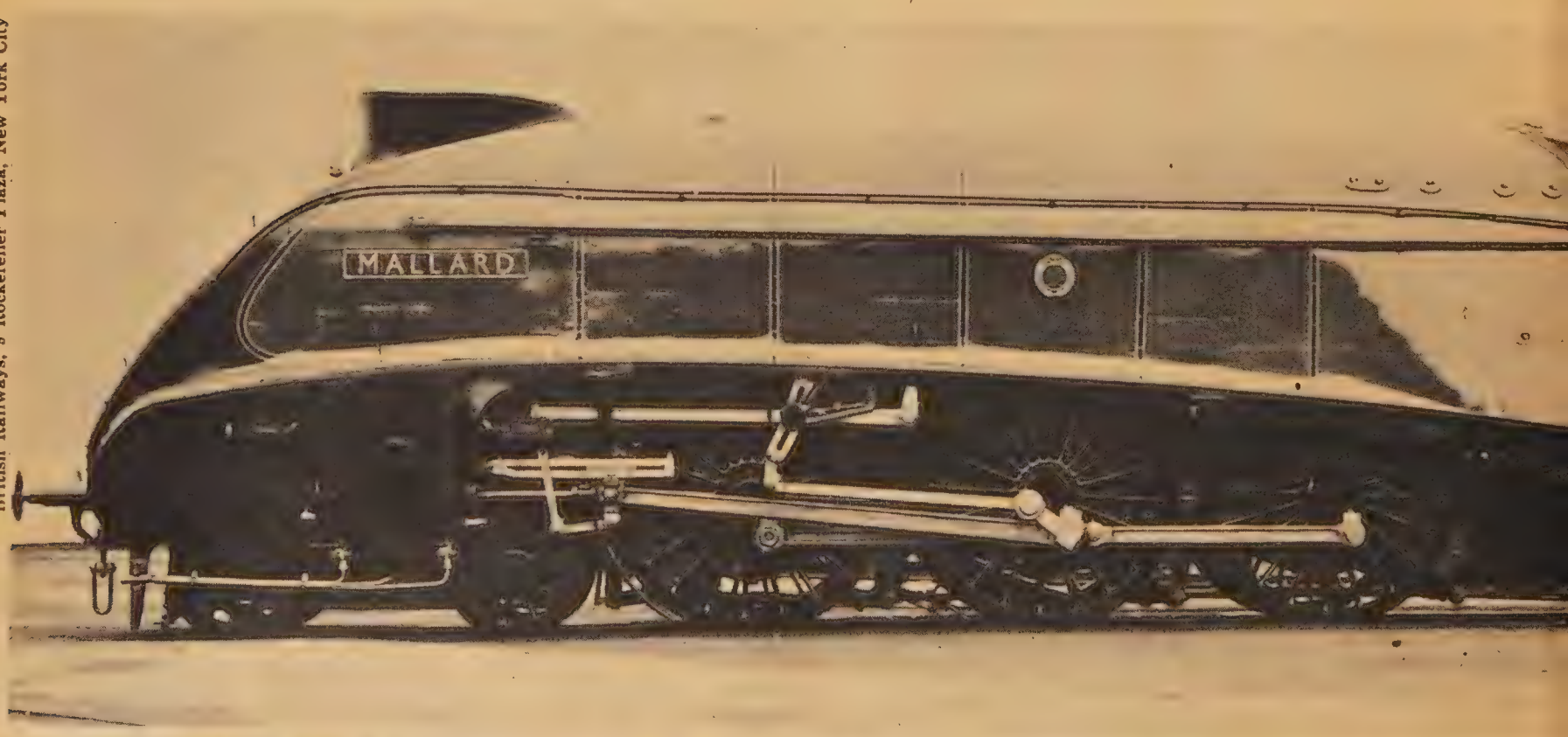
In September, 1912, Alco sold her to the Erie, where she became No. 2509, known to railroaders as "Big Liz," and in 1942 she spent a year on the Atlantic Coast Line pulling the beautiful *South Wind* between Montgomery and Jacksonville. The last Erie Pacific, No. 2960, outshopped in 1926, embodied many of the features built into Big Liz.

The 50,000, which should have been preserved in a museum, was ignominiously junked in 1950 at Warren, Ohio. It is interesting to note that her photograph and specifications were published in the *Locomotive Cyclopedia* as recently as 1922—quite a tribute to a ten-year-old girl!

An old edition of the *Cyclopedia* claimed that the Pacific evolved from the Atlantic type. Arthur Curran, who often wrote for *Railroad Magazine*, traced the 4-6-2's ancestry to the Ten-wheeler, which in turn, he said, sprang from the Eight-wheeler.

This is somewhat bewildering. I know that the Pennsy's famous K-4's were evolved in part from the road's equally great E-3 Atlantics. Aside from that, I would string along with Mr. Curran, because of certain records which show that many years ago the Milwaukee Road added a pair of trailer wheels to two of its Ten-wheelers, making them pseudo-Pacifics. Other records bring out the fact that the Atlantic Coast Line converted its first three 4-6-2's into Ten-wheelers, although the ACL later became one of the country's most consistent users of Pacific power.

Now that we've gotten into it, I might as well say that the Great Northern rebuilt a fleet of Ten-wheelers into Pacifics before turning them over to the Spokane, Portland & Seattle. But the oddest bit of rebuilding that came to my attention occurred in 1924 when the Baltimore & Ohio converted thirty Mikados (2-8-2's) into Class P-1C Pacifics. I would explain this by saying that some B&O Pacifics were patterned after the Pennsy's K-4's, whose boilers were interchangeable with the Pennsy's Mikados. Un-



British Railways, 9 Rockefeller Plaza, New York City

The British Railways' *Mallard*, a streamlined Pacific with 80-inch driving wheels, made 126 miles per hour on July 3, 1938,

doubtedly, the boilers of B&O "Mikes" were used on the converted Pacifics.

Another rebuilding job worthy of note took place in the Topeka shops when the Santa Fe turned two of its passenger Mallets (4-4-6-2's) into 4-6-2's. The same road had many Pacifics built with two steam domes, one fore and one aft of the sandbox. But the Illinois Central rates a blue ribbon for the most unusual rebuilding job in 4-6-2 history. Between 1905 and 1913 the IC sent sixty Pacifics into its shops to replace their 75½-inch drivers with 61-inch wheels and thus convert them into freight-haulers. Altogether, the road had a total of 180 Pacifics, used mostly in freight service.

Getting back to the Lehigh Valley, which started this whole thing, we learn that its large fleet of 4-6-2's was designed especially for freight and heavy passenger duty. Among them was the only double-cabbed Pacific in the world.

TURN now to Great Britain, a land where the Pacific has long been queen of the rails and where locomotives are more than mere steel and steam but bear such glamorous names as *Silver Link, Silver Fox, Woodcock* and *Mallard.*

Oddly enough, the old Great Western, long known as the road of Ten-wheelers, was the first to introduce the Pacific type to the rail-conscious British in 1908. Built at Swindon to G. J. Churchward's design and named *The Great Bear,* she was the sole Pacific in Britain until 1932. Later she was rebuilt into a 4-6-0.

Among Britain's greatest engines were the weirdly streamlined Class A-3 and A-4 Pacifics. Both classes were three-cylinder machines with huge 80-inch drivers that could really step through the moors and fens and downs of merrie England. Over the years they have set some speed and non-stop records never *officially* equalled by steam power elsewhere.

Fastest of them all, the *Mallard,* did some magnificent running that reached 126 miles per hour on July 3, 1938. The British claim that this is the world's *official* speed record for steam locomotives—and maybe they are right.

We have no intent to reopen the old controversy as to which individual steamer was the world's swiftest. At the outset we quoted a fireman as stating that a Pennsy K-4 actually bettered 125 mph. We have reason to believe that a Pennsy Atlantic type made 127.1 over a three-mile stretch of high iron in 1905. But neither of these figures is official. Donald M. Steffee, the top authority on North American passenger-train speeds, is openly skeptical of the 127.1 record—which, at this late date, can neither be proved nor disproved. Officially, at least, the *Mallard* wears the speed crown.

In the days before nationalization created the "British Railways," there was fierce rivalry for speed among the privately owned lines, the chief competitors being the Great Western, the London & North Eastern, and the London, Midland & Scottish.

The Great Western grabbed the speed spotlight in 1932 with its Castle Class 4-6-0's and held it until '36, when the LNER came out with its *Silver Jubilee*—England's first streamliner—named for the 25th anniversary of the reign of King George V. The LNER boasted 113 miles per hour set by a Class A-4 Pacific, the *Silver Fox,* wheeling the new streamliner. This run was a sensation.

Meanwhile, the LMS was readying its now-famous *Coronation Scot* for a go at the speed laurels, laying its money on a Duchess Class 4-6-2 with four cylinders and gigantic 81-inch drivers. Well, sir, the *Scot* thundered through the countryside at 114 mph., and a mighty shout of triumph went up.

The LNER people, losing the crown by the narrow margin of one mile per hour, took steps to regain it and came up with the *Mallard.* Eighty-inch drivers revolving at better than 500 times a minute reached a speed of 126 mph., an official record that still stands.

J. Duddington, who handled the throttle on that celebrated run, has since died, but his fireman, T. A. Bray, is now a driver (engineer) with the Doncester motive power department of the British Railways.

Americans who feel unhappy over British speed runs may find solace in the fact that a sister engine of the *Mallard* is named *Dwight D. Eisenhower.* Furthermore, British passenger trains in general are very far

which is regarded *in official circles* as the fastest steam-powered run in history.

from being the kind of speedsters we've mentioned. One story is worth repeating. A passenger who had made the long and weary trip from the hinterland of Kent into London gathered his luggage as his train pulled into Charing Cross station, and sighed aloud:

"The worst of my journey is over!"

"Going far?" a fellow passenger asked.

"China," was the laconic reply.

The global record for non-stop running with steam was set September 7, 1948, with a Pacific type, the *Woodcock,* Class A-4, pulling thirteen coaches from London to Edinburgh, 408½ miles. The run between those two cities is regularly non-stop but on that celebrated occasion a detour caused by floods added some mileage to the normal distance.

CROSSING the Channel to France, we find the world-famous Andre Chapelon 4-6-2's (the French designation for them is 2-3-1), with miles of outside piping that connects with appurtenances and makes these engines, pound for pound, the most efficient of all Pacifics. This type was first introduced to the nation in 1907 on the Paris-Orleans Railway. No class anywhere has shown better performance over the years. Much credit belongs to Chapelon, the great locomotive designer who raised the superheaters and feedwater heaters to the peak of efficiency.

A Chapelon Pacific, weighing but 229,800 pounds, developed 3600 horsepower at the drawbar and could handle an 850-ton train at 56 miles per hour. Check this against the New York Central's first Hudsons, which produced only 3100 hp. at the drawbar while running 57 mph. Compare it further with the Central's K-5 Pacifics, 2500 hp. at the drawbar with 45 mph., and then salute the brilliant Chapelon for his achievements.

And while we are flitting about overseas we will hop to Argentina. The most handsomely finished locomotive in Baldwin's long history was a 4-6-2 exported to the Argentine Railways in 1923. She was, in fact, the first locomotive ever shipped from the United States fully assembled. Her polished nickel fittings and bands glittered like fire in the sunlight on her initial run pulling the inaugural train of Argentina's new president.

Everywhere, from Australia to Argentina, from Alaska to Mexico, the Pacific has played a triumphant role. Our Canadian cousins contributed much to this type. In 1944 the Canadian Pacific startled a diesel-minded world by accepting delivery of the first in a series of trim Class G5a light Pacifics, No. 1200. The last in a lot of thirty, No. 1301, took to the rails in '48.

Also in 1948 the Canadian Pacific acquired ten larger 4-6-2's from Montreal Locomotive Works. These were the last Pacifics built in Canada. The Canadian National acquired its first 4-6-2's in 1905 and its final batch in '29. Also in 1929 the CNR added two Alco-built Pacifics to its roster for service in the 42-inch-gage Newfoundland Division. If any other road used narrow-gage 4-6-2's I wish someone would tell me about them.

In the United States three big roads, the Pennsylvania, the Southern, and the Baltimore & Ohio, stand out as the largest users and developers of Pacific-type engine. Few will question the statement that the Pennsy's Class K-4 were, taken as a series, America's finest 4-6-2's. The first of them, No. 1737, was built at the Altoona shops in 1914 and her performance was so superb that the officials looked no further for an engine to handle passenger trains on their entire system. The series ended in 1927, when a total of 425 K-4s were in service. Some of these mighty engines are still in operation.

In 1929 the Pennsy, seeking a 4-6-2 passenger engine to equal the newly built Hudsons (4-6-4's) of the New York Central, ordered two Class K-5 Pacifics, which were then the largest of the type ever built. One was No. 5698, built at the Juniata shops. The other, No. 5699, equipped with Caprotti valves, came from Baldwin. There's a legend that the 5698 exceeded 125 miles per hour with a dozen heavy steel passenger cars, but I can't vouch for it. At any rate, the Pennsy finally concluded that its K-5's could not match the Hudsons in efficiency and so they scrapped them both but did not replace them with Hudsons.

THE SOUTHERN had the most beautiful and best-maintained Pacifics that ever burnished the rails of North America. In 1903, as I said, the Southern began using this type. Twenty years later it took delivery of its first Schenectady-built Ps-4's. Those babies could handle 15-car trains at 80 miles per hour, mile after mile.

In 1925 the road's president, Fairfax Harrison, visited England and was so much impressed with the brightly-painted British power that he decided to doll up the Southern's engines. The Ps-4's went into the Richmond shops for new paint jobs and emerged as the sensation of the railroad world. A rich shade of green with gold-leaf striping and silver-colored tires set off their graceful design.

Each locomotive was assigned to an old engineer, who was given free rein to add further decorations of his own choice. Gleaming bronze eagles, resplendent lodge emblems, even candlesticks, and other metal objects enhanced the appearance of the big Pacifics, while the hogger's name was emblazoned in gold leaf on the sides of his cab. Meticulously cleaned and polished, the Ps-4's rode the steel like queens. The last of them, Baldwin-built, went into service in 1928.

Tom Acree, a retired Southern train dispatcher, tells me that on April 12, 1945, his company used eight Pacifics to haul the 11-car funeral train of Franklin D. Roosevelt, with the President's body lying in state in the rear observation car *Magellan,* from Atlanta, Ga., back to Washington, D. C. Two of these engines were coupled together over each division, as follows: Nos. 1409 and 1394, 1401 and 1385, 1367

Dramatic shot of Canadian National No. 5117, a Pacific, wheeling fast freight M-215 across Manitoba prairie near Anola.
Fred Sankoff, 25 Botfield St., Toronto, Canada

and 1400, and 1366 and 1406. All were highly polished and as near to mechanical perfection as human skill could make them.

Any single Pacific could have handled the special alone, but the extra engines were used as a precaution, in case one should develop trouble. It was a matter of Southern pride to have no delay en route.

One of the eight, No. 1401, built by Richmond Locomotive Works in 1926, is being preserved at the Southern's roundhouse in Alexandria, Va., to be placed on permanent exhibition in the new engineering museum of the Smithsonian Institution when it is completed in 1960. Until then the proud 1401 has good reason to be camera-shy. She is stored out of sight in a dark shed with her cab boarded up and her side rods down and she is covered with dust. You wouldn't be able to take a photograph of her now.

BALTIMORE & OHIO put its first Pacific into service in 1905 and over the years did much to develop this type. Take, for example, the President Class of 4-6-2's. There were twenty of them, named after the first twenty Presidents of the United States. Each was a fine specimen mechanically and was handsome in a coat of olive green with gold striping.

Actually, these locomotives were modified versions of the Pennsy's famous K-4's. Their performance in heavy, high-speed, passenger service equaled that of the K-4's.

Four of the Presidents were streamlined in 1927 to handle the Baltimore-Cincinnati express, the *Cincinnatian*, and they reeled off some sensational running. One of them, No. 5304, was taken off the *Cincinnatian* and de-streamlined, but in 1937 was given a sleek blue and gold shroud for service on the *Royal Blue*. She did a magnificent job with the *Royal Blue* until a diesel-electric locomotive took her place in 1939.

The B&O kept improving its 4-6-2's until as late as 1949, when No. 5315 emerged from the Mt. Clare shops equipped with roller bearings on all axles plus other modern features. Lawrence W. Sagle of the B&O public relations staff, brings this part of the story up to date as follows:

"Since April 30, 1957, no Pacific type engine has been in B&O service on a regular basis. Seventeen are in stand-by service at Chicago, Newark, St. Louis, and Toledo. We have asked that the original President Class 4-6-2, No. 5300, be earmarked for permanent exhibition at our Baltimore museum. However, the present museum is too small to house a giant Pacific. We would need a suitable building for her."

Clinchfield Railroad hogger oils an old Pacific, No. 151, on a dark rainy morning at Kingsport, Tennessee, in 1946 in readiness for one of her last trips.
Ben F. Cutler, Rail Photo Service, 93 Massachusetts Ave., Boston, Mass.

Richard E. Prince, Jr., Norfolk, Va.

No. 1401, shown with the *Crescent Limited* in 1939, is one of the Southern's Pacifics that pulled the funeral train of President Roosevelt in 1945. She is now being kept in storage for presentation to the Smithsonian Institution.

H. W. Pontin, Rail Photo Service

Atlanta & West Point No. 281 in three-train meet at Montgomery, Ala., in 1935.

But Pacifics of the Pennsy, the Southern, and the B&O, important as they were, furnish only a small part of 4-6-2 history. We must not overlook the super-styled Delaware & Hudson Pacifics, America's only locomotives styled to resemble British engines. Of especial interest in the D&H fleet of 4-6-2s was Caprotti-valved No. 653 which boasted 22x32-inch cylinders and a monstrous tractive effort of 59,500 pounds. In the latter respect she was outranked only by the Richmond, Fredericksburg & Potomac's Pacifics (59,950) and the Omaha Road's mighty E-3s, the heaviest and most powerful Pacific-type engines of them all. And few 4-6-2's were ever built with a cylinder stroke of 32 inches.

On January 2, 1935, the Chicago & North Western stole a march on the Burlington and the Milwaukee Road by putting its ballast-scorching *400* into service between Chicago and Minneapolis. This train was powered by rebuilt Class E-2 Pacifics of the 2900 Class and their speed and on-time performance were phenomenal.

CAME the day when a railroad without a streamlined steamer was considered old-fashioned. Raymond Loewy and Otto Kuhler, noted stream-stylists of the day, along with officials of many roads, worked overtime to come up with distinctive locomotive shroudings. We have already touched on the B&O's contribution to this trend.

In recalling the streamlined Pacifics of that era, we note those especially styled for famous trains. Long to be remembered were the Reading 4-6-2's on the *Crusader* and the Lehigh Valley's 2101, beautifully painted in Cornell red, with white pin striping, one of America's most exquisite streamlined Pacifics.

Add to these the Central's *Mercury* engines, the Union Pacific's *Forty-Niners*, the Santa Fe's *Valley Flyers*, and the glamorously painted engines on the B&O, the Frisco, the Southern, the Seaboard Air Line, and many others. Nor should we

forget certain of the Pennsy's K-4's which are credited with having been the most scientifically streamstyled steam engines ever to power a "name" train.

Down in the Lone Star State in 1937 the Southern Pacific streamlined three Brooks-built Pacifics of 1913 vintage, painted them in *Daylight* hues of red, orange, black, and white, and assigned them to the popular *Sunbeams* and *Hustlers,* the swiftest and flossiest trains ever to link Dallas with Houston. Those mills, ancient though they were, maintained a 98 percent on-time record and when at last, in 1954, they fell apart under the blowtorch each carried to the scrap pile more than forty years of seniority in passenger service!

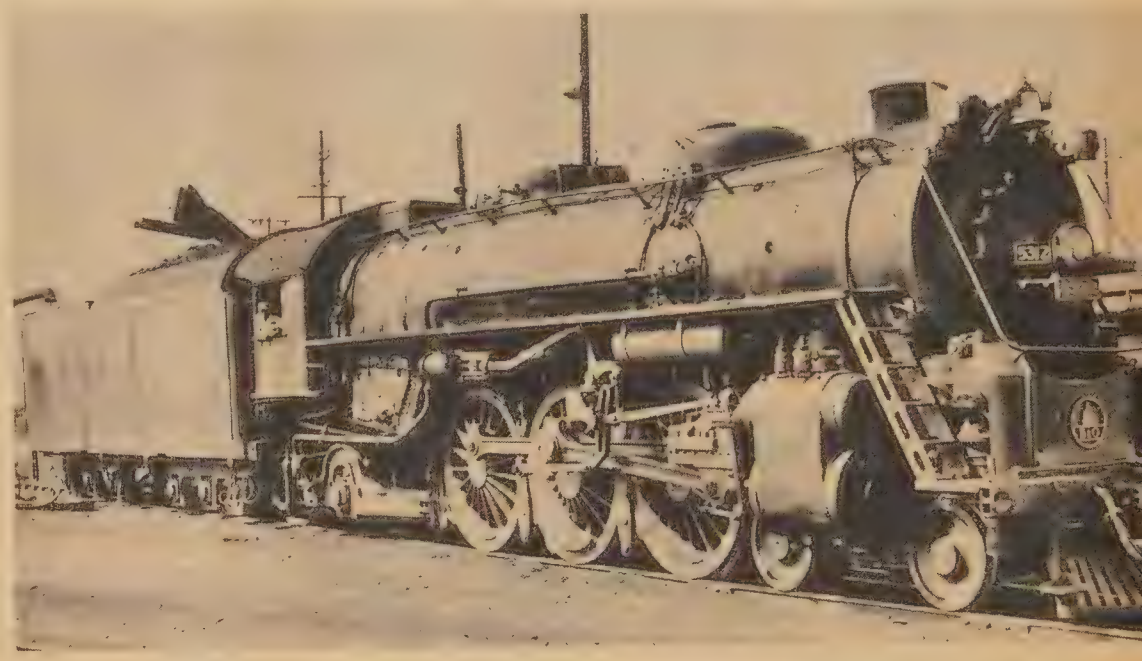
Here is a partial list of the 4-6-2's that have been preserved in America for future generations:

Sioux City, Iowa: Great Northern No. 1355
Tampa, Fla.: Atlantic Coast Line No. 1504
Miami, Fla.: Florida East Coast No. 153
Sparks, Nev.: Southern Pacific No. 2467
Calexico, Calif.: SP No. 2458
Santa Clara County, Calif.: SP No. 2479
Waterville, Me.: Maine Central No. 470
Boston, Mass.: Boston & Maine No. 3717
Horseshoe Curve near Altoona, Pa., Pennsy K-4 No. 1361.

Railroad Magazine will be happy to publish any additions to this list that readers send in. The last ten Pacifics built in the United States, Nos. 210-219, Class G-3, were constructed by and for the Reading in its own shops in 1948. Today, a mere decade later, none of them remain, the final three having been scrapped in 1957.

Relatively few Pacifics are left in American service, and around them are closing the shadows of eternal night. Soon, too soon, they will be remembered only as a bright episode of fading history. Visitors to museums here and there will gaze on the steam giants, silent and lifeless. Some in imagination will see them climbing the hills and speeding across the prairies with fast-rolling passenger cars at the rear and with great billowing clouds of white smoke climbing to the moon. ●

Delaware & Hudson brass collars inspected their latest Pacific-type engine, No. 653, before sending her to Chicago for exhibition at Railroad Fair of 1934.
H. W. Pontin, Rail Photo Service



Baltimore & Ohio No. 5312 in blue paint poses at Sandusky, Ohio, on a fantrip. Back in the days of her glory, this 4-6-2 bore the name *President Pierce.*
Don Wood

One of the last Pacifics built in U.S. was Reading No. 218, Class G-3, snapped at Camden, N. J., in October '55 on Pennsylvania-Reading Seashore Lines.
Aaron G. Fryer, 6001 Drexel Road, Philadelphia, Pa.

Fruehauf trailers like these rumble over the macadam and then climb onto Western Pacific flatcars and ride the rails.

Will "Piggyback" Make the Boxcar Obsolete?

This Question Is Raised by the Growing Amount of Freight That Is Moving in Trailers to and from the Rails and on Railroad Flatcars

by Freeman Hubbard

THE PRESIDENT of a huge trailer company, Roy Fruehauf, is quoted as saying: "The railroad boxcar is on its way to the Smithsonian Institution. I think piggyback will replace practically every boxcar in the country. All of the freight now carried by the nation's fleet of 719,000 boxcars will be moved instead by trailers riding on flatcars. And that time isn't far off."

That is a bold prediction. Let's see whether or not Mr. Fruehauf is talking through his hat. What is piggybacking, anyhow?

It is a trailer-on-flatcar service designed to bring about faster movement of goods by rail at truck rates by using current transportation facilities more efficiently. The word *piggyback* became railroad lingo only a few years ago, but the principle dates back more than a century. From 1843 to 1855 sectionalized canal boats were hauled on flatcars between Philadelphia and Columbia, Pa., and between Hollidaysburg and Johnstown, Pa., as part of the Philadelphia-Pittsburgh rail-water service on what is now the Pennsylvania Railroad.

Then in 1885 Canadian farmers began loading their teams and wagons on cars of the Halifax-Truro Railway to ease the long and tiresome journey to market. Thirty years later the Long Island Rail Road was operating "farmers' trains" on the island and across the East River into New York City, each flatcar holding four loaded wagons, with Dobbin and Bessie riding in specially-built boxcars on the same train. Circuses, too, moved by rail in piggyback fashion for nearly a century.

In May, 1926, loaded motor trucks were hauled by rail for the first time, the experiment being made by the Chicago, North Shore & Milwaukee from Chicago to Milwaukee. Some railroad officials criticized the venture as "giving aid and comfort to the enemy." They feared that carload freight now moving at a profit would be diverted into piggyback trailers hauled by the railroads for less revenue.

Gradually the idea took hold. The Interstate Commerce Commission called it "an exceptionally economical and efficient method of handling less-than-carload freight." And in the fall of '56 highway trailers began

riding piggyback from coast to coast.

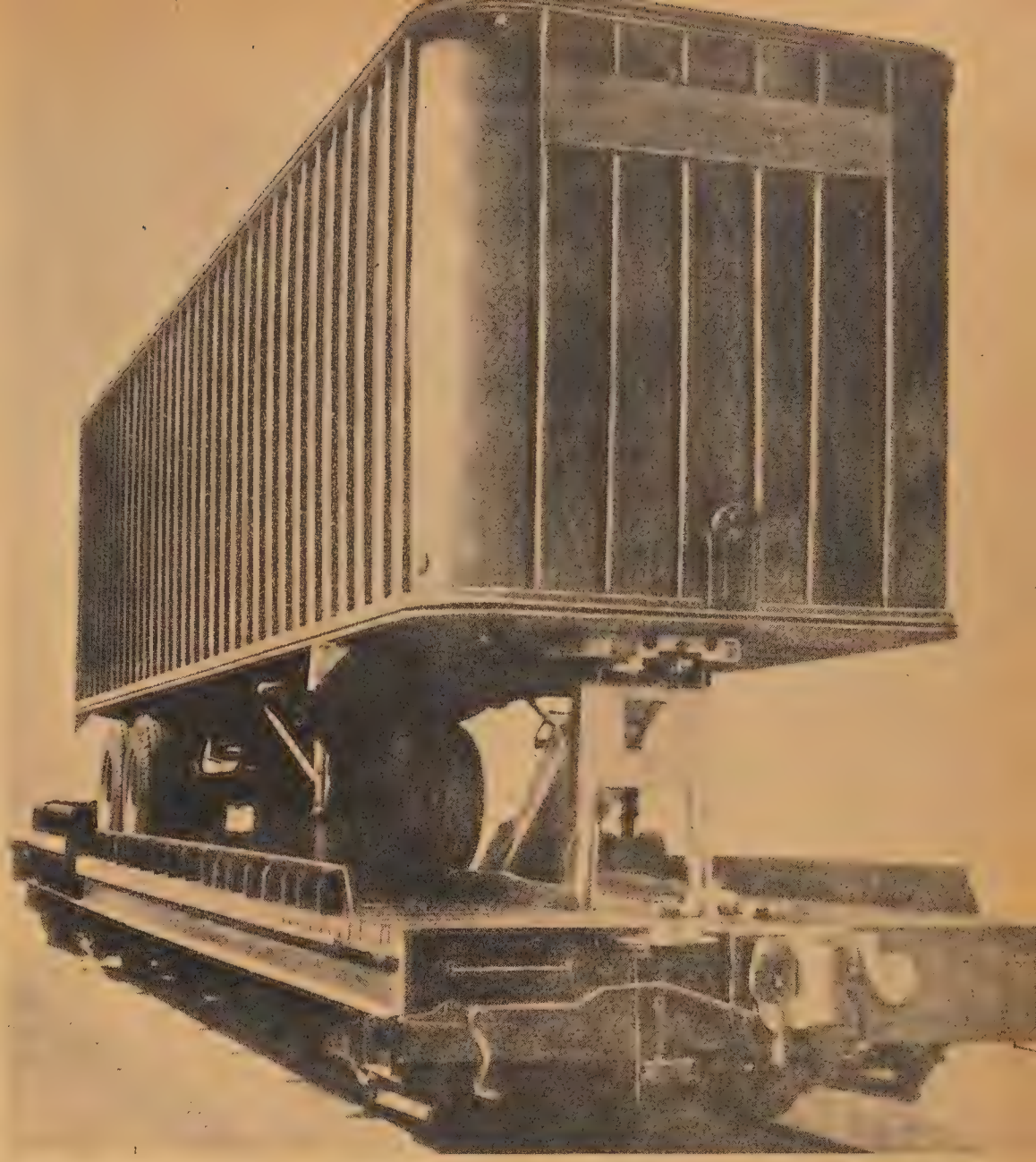
Well over 4,000 flatcars are now in piggyback operation, while ACF and Pullman-Standard are busy designing and building new types of flats to haul trailers. The railroads also have 3,000 trailers of their own on piggyback runs and many additional flats and trailers on order.

The water version, known as fishbacking, began with car ferries more than a century ago. Since 1929 the Seatrain Lines, Inc., have been fishbacking loaded freight cars on seagoing vessels. This is rail-water operation. But the transportation of highway trailers by boat on the Hudson and Ohio rivers, the Gulf intracoastal waterway, and through Puget Sound bypasses the railroads altogether and cuts sharply into their freight revenue.

"With the coming of the St. Lawrence Seaway," Fruehauf boasts, "fishbacking is going to be one of the dominant features of the Great Lakes. It is not often in history that a place like Cleveland, located over 500 miles from the ocean, finds itself becoming a world seaport. Trade between cities here in the United States will be carried largely in the new roll-on, roll-off trailer ships."

But trailer-on-flatcar service is bringing a lot of highway freight back to the rails. Today, nearly fifty Class 1 roads in the United States offer such service to industrial shippers and the number is growing. Within the next several years, partly as a result of the $100 billion Federal highway-building program, there is reason to believe that nearly all of our Class 1 roads will have joined the piggyback procession.

North of the border, too, the carriers are falling into line. News that the Canadian National and the Canadian Pacific have begun to haul motor truckers' trailers on flats between Toronto and Montreal heralds a revolution in the Dominion's transportation setup. This is the first piggyback deal that Canada's top rail systems have made with "for hire" truckers. Hitherto, the rail and highway interests had fought tooth and nail for freight consignments.



The ACF Retractable Trailer-Hitch was designed to anchor highway vehicles to railroad flatcars so solidly that no swaying of a train could dislodge them.
ACF Industries, Inc., New York City

Four Wheel Drive Auto Co., Clintonville, Wis.
Trailer spotter for piggyback service. This new-type 0-4-0 can hook onto, move, and unhook from a semi-trailer without the driver getting down from his cab.

Southern Pacific Railroad

Magnitude of piggyback business is shown by long Southern Pacific train, all piggyback cars, rounding Horseshoe Curve near San Luis Obispo, Calif. (Below) Railroad-owned trailer loaded with Rheemglas water heaters is backed onto SP flatcar.

Since 1951 the great Canadian railways have been operating their own piggybacks in the East between Montreal, Toronto, and Windsor, while out in the wheat belt and across the eternally snow-tipped Rockies the CPR has been toting by rail the highway trailers of its own subsidiary, Canadian Pacific Transport. Now, however, the bars are down and the outside truckers have gotten into the act in a big way.

Coming back to the States, piggyback volume exploded into new high levels in 1956. During eight months of that year the Southern Pacific's piggyback business rose 24 percent over 1955. But that wasn't all. The Pennsy's shot up 40 percent, the Lackawanna's 47 percent, the Burlington's 60 percent, and the Wabash's piggyback volume soared 83 percent above previous figures! And the "pigs" are still climbing.

From some railroaders' viewpoint, piggyback business is gravy. They would not get it without the aid of motor trailers. They do not have to solicit it. They need not own nor operate the highway vehicles, although many of them do, nor is it necessary for them to bother about pickup or delivery. And the shippers welcome piggyback!

Naturally, the railroads dislike having to share their freight revenue with truckers, but if they didn't the latter would do rather well alone by using less speedy schedules. Ernest C. Poole, a consulting transportation engineer formerly with the Southern Pacific, warns that piggyback isn't priced right. He cites instances in which railroads actually lost money by hauling loaded trilers on flats. This whole matter of rate structure had better be looked into.

But what about Roy Fruehauf's boast that the boxcar is doomed to extinction? Is he right? We don't think so. Piggyback is lessening the demand for boxcars, of course, just as television is lessening movie-theater patronage. But plenty of people who own TV sets still go to film shows just as plenty of shippers will continue to use boxcars.

So long as we have industrial sidings we will need boxcars. For example, the Firestone plant in Los Angeles receives full carloads of a certain fabric by rail from the manufacturer's dock in North Carolina. The goods are shipped direct to the Firestone unloading dock in L.A. At no point en route does a highway vehicle enter the picture.

Or take the grain industry. Grain is usually transported by boxcar from one elevator to another. Why should motor vehicles intrude? The capacity of trailers is limited. Think how many of them would have to be built and operated to handle the tremendous volume of wheat that rolls out of Kansas or Saskatchewan!

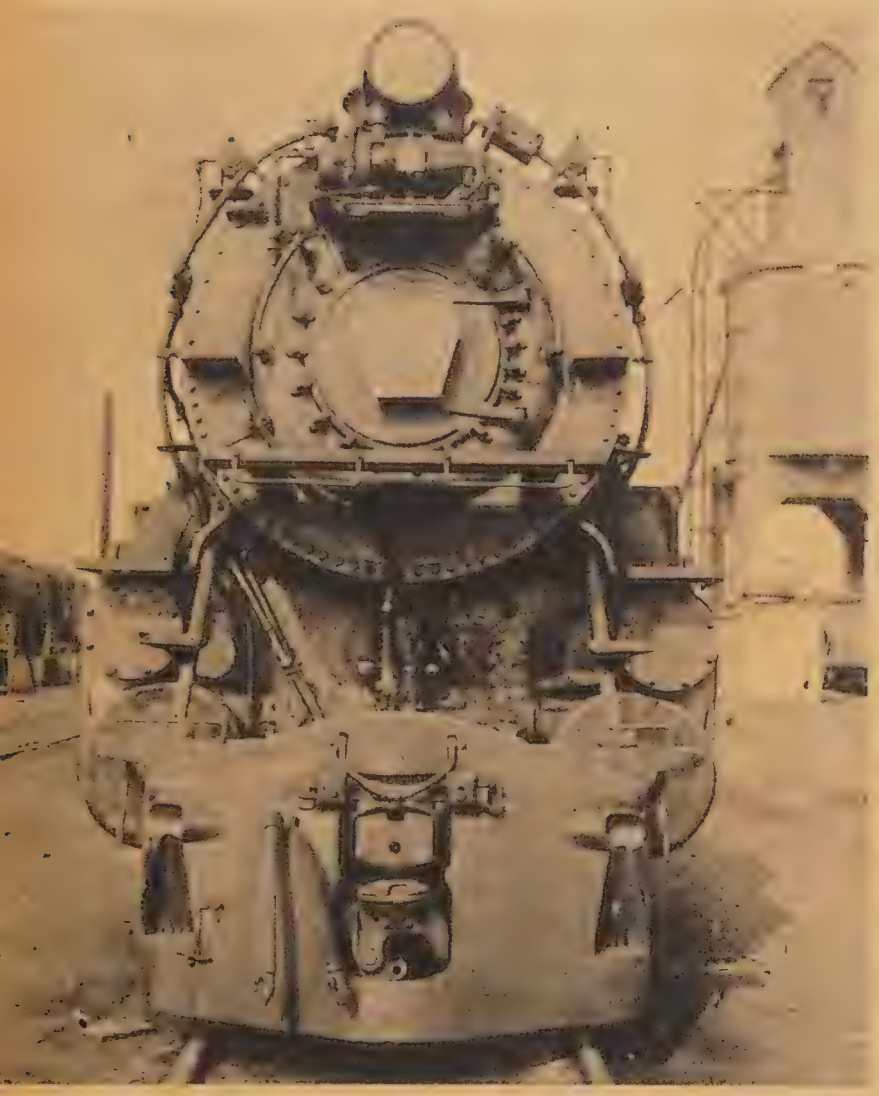
If, as Fruehauf says, "the railroad boxcar is on its way to the Smithsonian Institution," it must be carrying material of one kind or another to the national museum. Piggyback is helping many shippers and is bringing some of the highway business back to the rails but is not making the boxcar obsolete. ●

Coffee arriving at New Orleans by ship is unloaded to Illinois Central piggyback trailer which will ride on special flatcar.
Illinois Central Railroad

Servicing a K-4s at South Amboy

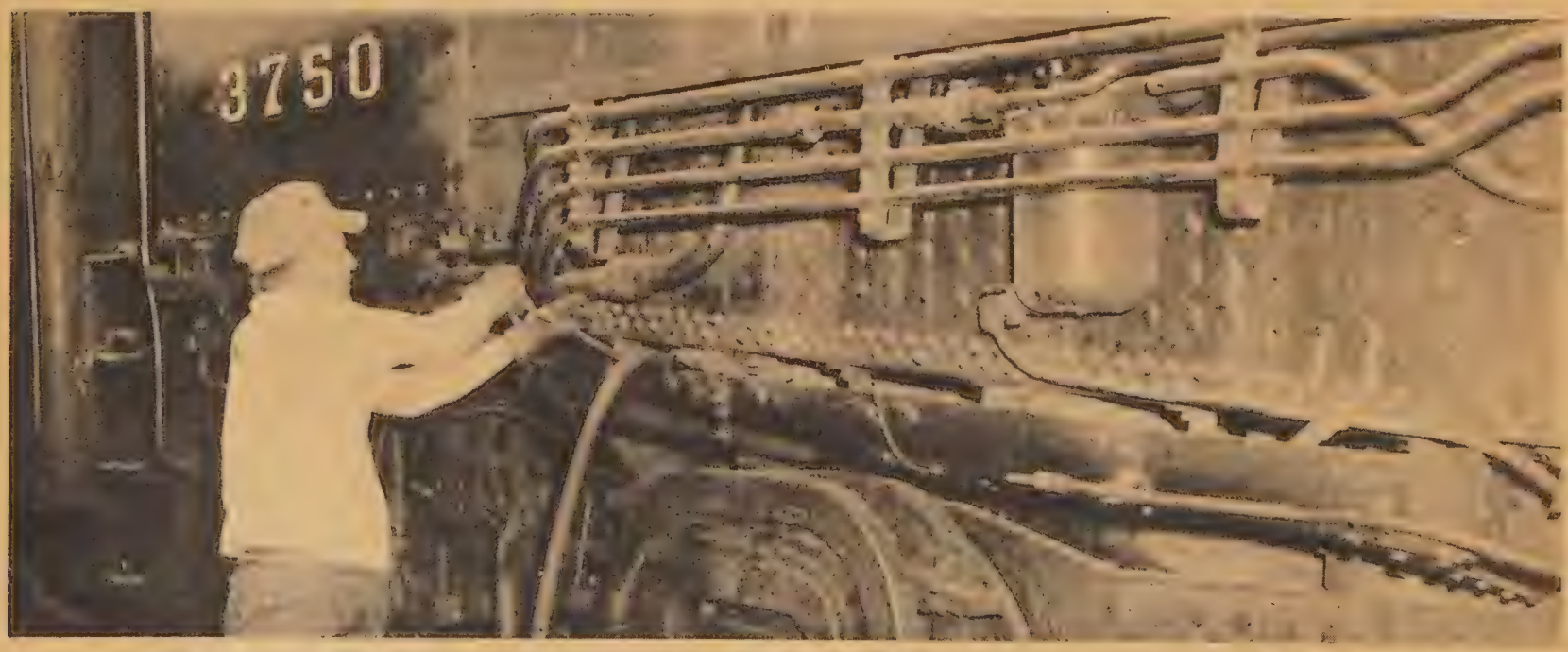
Photo-Story by Gene Gentsch and Bud Rothaar

DEDICATED TO THE MEMORY OF A GREAT PENNSY ENGINEMAN, RALPH W. MAXSON



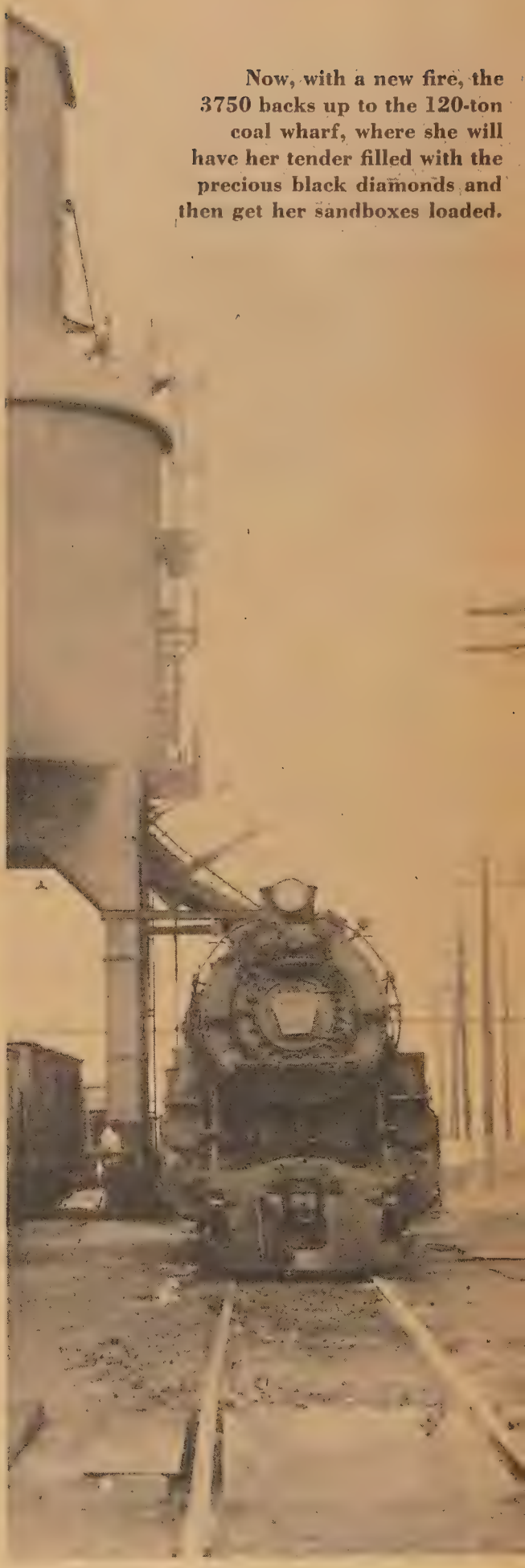
Pennsy Pacific-type No. 3750, which has just brought in a local passenger train to South Amboy, N. J., arrives on inbound house track ready to be switched to pit for switching.

The 3750 takes a drink. She's not very thirsty, having used but one-third of her 13,000 gallons on 38-mile run from Bay Head. Hostler A. Arons fills tender in three minutes.



Over the ashpit, hostler opens her ashpan doors (below the firebox) and cleans out the left and right pans with a pressurized water hose before emptying the firebox of its ashes and clinkers. If he had dumped the road fire first he would have clogged the pans and in that case he would have had a rough time pushing the big clinkers through the small dump port openings.

Climbing into the cab, Mr. Arons sets the blower on full and probes the firebox with a long "Paul Bunyan" hoe, forcing the dead clinkers and ash to fall through the clean pans below and into the ashdump under the locomotive.



Now, with a new fire, the 3750 backs up to the 120-ton coal wharf, where she will have her tender filled with the precious black diamonds and then get her sandboxes loaded.

In the sandhouse, a laborer fills store bunkers with wet sand to replace stock already used. The sand is packed into funnel-like containers and is dried, filtered, and piped into locomotives.

Bird's-eye view of South Amboy yards showing (in the center) Hostler Arons operating No. 3750, with her smoke plume curling upward. On a sidewalk we see a hopper loaded with coal destined for the coal wharf and eventually for a K-4s firebox.

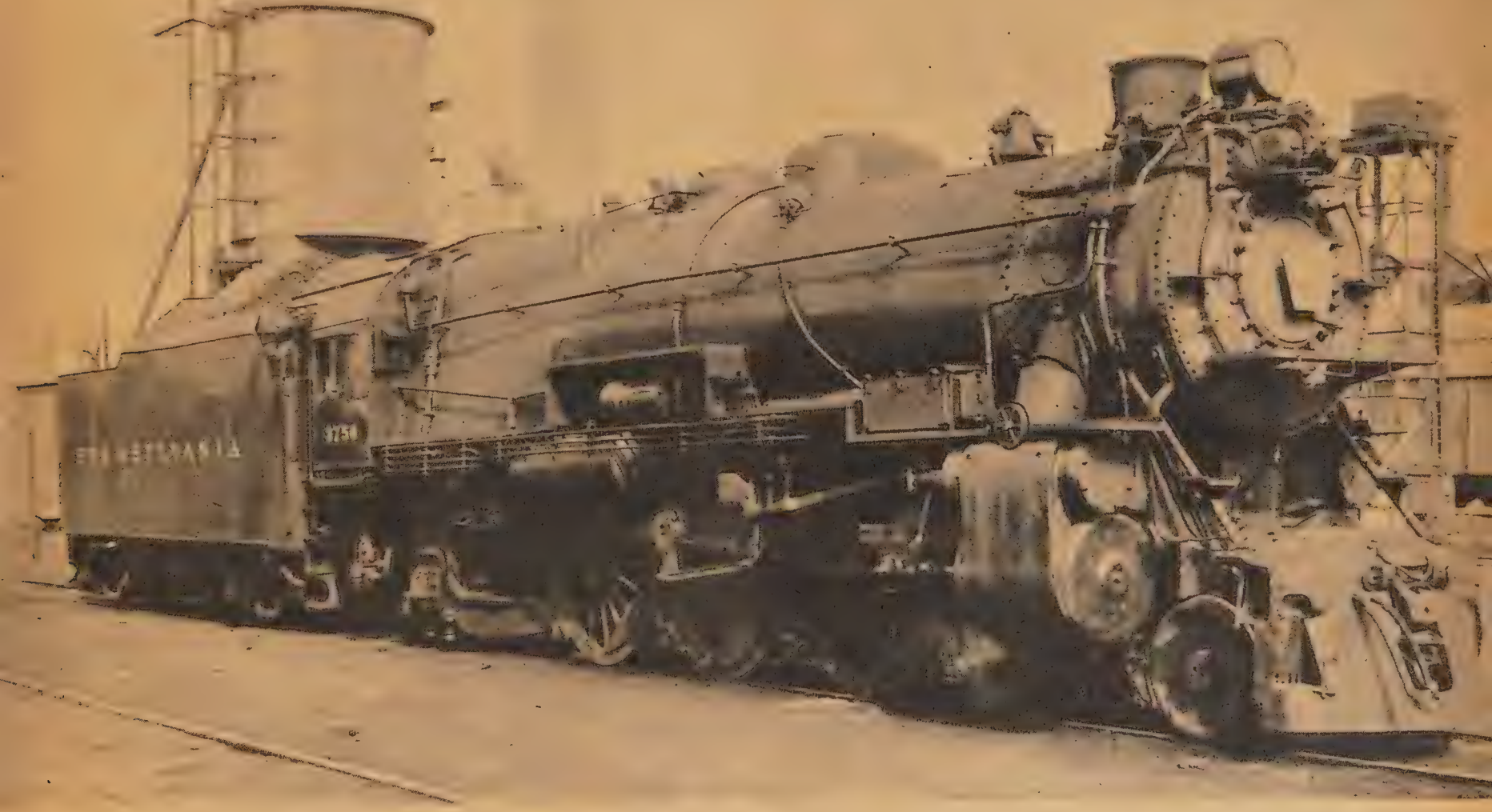
Machinist Bob Murray greases all alemite fittings with a pressurized grease gun while a fellow worker (at the right) fills the mechanical device on the fireman's side that lubricates the piston rods, guides, valve stems, and other fittings on the front end.

Bob Murray, high on the coal wharf looking down at the 3750's bunkers, trims his coal pile to fill the tender. The entire job takes him only four minutes. When it is finished the tender will be carrying between 23 and 25 tons of good bituminous fuel.

Unusual view of an engine: 3750 has backed further under the coal wharf to the pressurized sandpipe where her split double sandbox atop the boiler is filled with dry filtered sand.

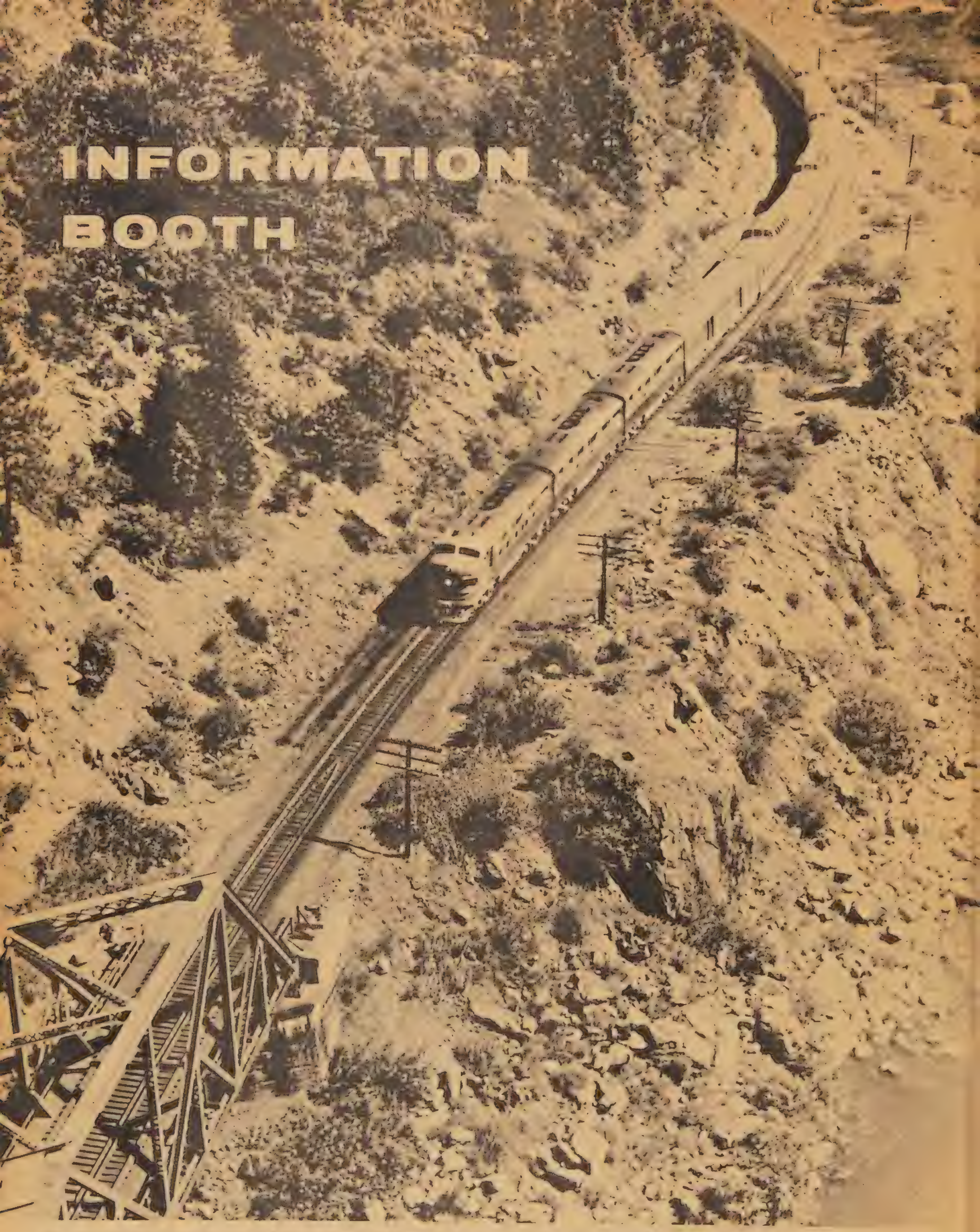
Joe Messna, a steam mechanic, drains all main reservoirs of their condensed water, a white milky liquid, so as to keep air lines from engine to train in perfect operating condition.

Mechanic checks tender journals for possible waste grabs, which could cause much damage if running hotboxes develop. Journal boxes are hand-filled with fine grade lubricating oil.



And now No. 3750 stands in clear on the outbound track at South Amboy. She has been fully cleaned, watered, coaled, sanded, inspected and lubricated and she carries a good head of steam, ready for a day's work. The entire servicing of this mighty steed was done in the short time of one hour and ten minutes. Her next assignment is to take out local passenger train 797.

INFORMATION BOOTH



No. 18, eastbound Zephyr just before it crossed the Feather River west of Pulga station. This shot was made from highway bridge.
Peter Josserant, Western Pacific Train Dispatcher

ASK BARBARA: **Railroad questions are answered here every issue by our research expert—as many as space permits. Top priority is given to subjects that seem to be of wide general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York 17, N. Y. No replies will be sent by mail.**

1 *What have the French been doing recently in the locomotive field?*

A new type of diesel-electric worth watching, the second 060 DB, has just been built at Peronniere of the *Saint-Chamond des Acieres et Forges de la Loire*. This mobile power plant has two diesel motors which generate 1800 hp and weighs 105 tons. Equipped with a novel kind of equalizer truck, it is the swiftest French diesel-electric in its category, with a speed potential of 80.6 mph. French National Railroads has ordered 20 of this advanced type, and 25 more will go to Argentina.

During the year the *Saint-Chamond* plant also will bring out two gas-turbine motors to run on heavy oil.

2 *What is the approximate cost and consist of a typical North American de luxe long-distance passenger train?*

About $3 million. Such a train would be powered by a two-unit diesel-electric locomotive and would include a baggage car, three-day coaches, six or eight Pullman sleepers, a dining car and lounge buffet.

3 *Where can I find a history of the Minneapolis, Northfield & Southern?*

In Aug. '43 *Railroad Magazine*, Since then the road has been completely dieselized. As of Nov. 1st, 300 new 100,000-capacity steel boxcars and eleven locomotives were in operation.

4 *A rundown, please, on equipment of the old Rio Grande Southern.*

When the road opened in 1892 its rolling stock was as follows: 35 locomotives, 10 cabooses, 147 flatcars, 287 coal cars, 62 stock cars, 457 boxcars, 13 coaches, 4 mail-baggage-express combination cars, 4 baggage-passenger combination cars, 22 service cars (bunk, tool, outfit, etc.), 2 rotary snowplows, 3 flangers, and 2 business cars, *Rico* and *Edna*. All were acquired second-hand and equipment dwindled rapidly during the first few years of operation. By 1932 only the following remained: 13 locomotives, one flatcar, 7 cabooses, 31 service cars, 5 coaches, 4 motors ("Galloping Geese"), one rotary and one flanger.

At the time of abandonment in 1951, rolling stock consisted of 6 locomotives, 5 cabooses, and 6 motors.

Aside from its own locomotives, the road often leased Denver & Rio Grande engines. After the RGS freight equipment was gone, all business was handled by narrow-gage D&RGW cars of various types.

5 *Will Carl Fallberg's "Fiddletown & Copperopolis" cartoons be published in book form?*

We don't think so. But you could write to Mr. Fallberg, 3201 Angus St., Hollywood 39, California.

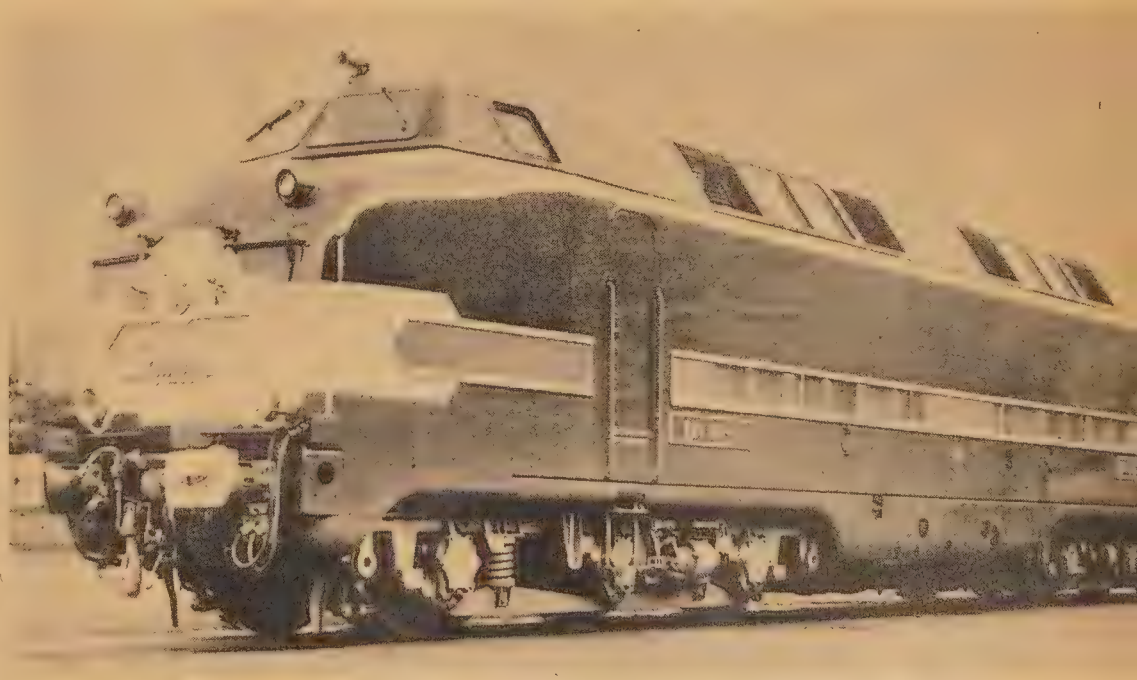
6 *Why is Chicago called the world's greatest railroad center?*

Because a maximum of rail operations are concentrated there. Nineteen trunkline railroads enter the city over 27 major routes. In addition, there are 18 switching, industrial, and electrical lines in the Chicago terminal district, embracing 7,800 miles of track over which some 300,000 freight cars and more than 1,500 passenger trains roll daily. Passenger traffic in and out of the city averages 300,000 a day.

7 *Who is the oldest retired railroader in the United States?*

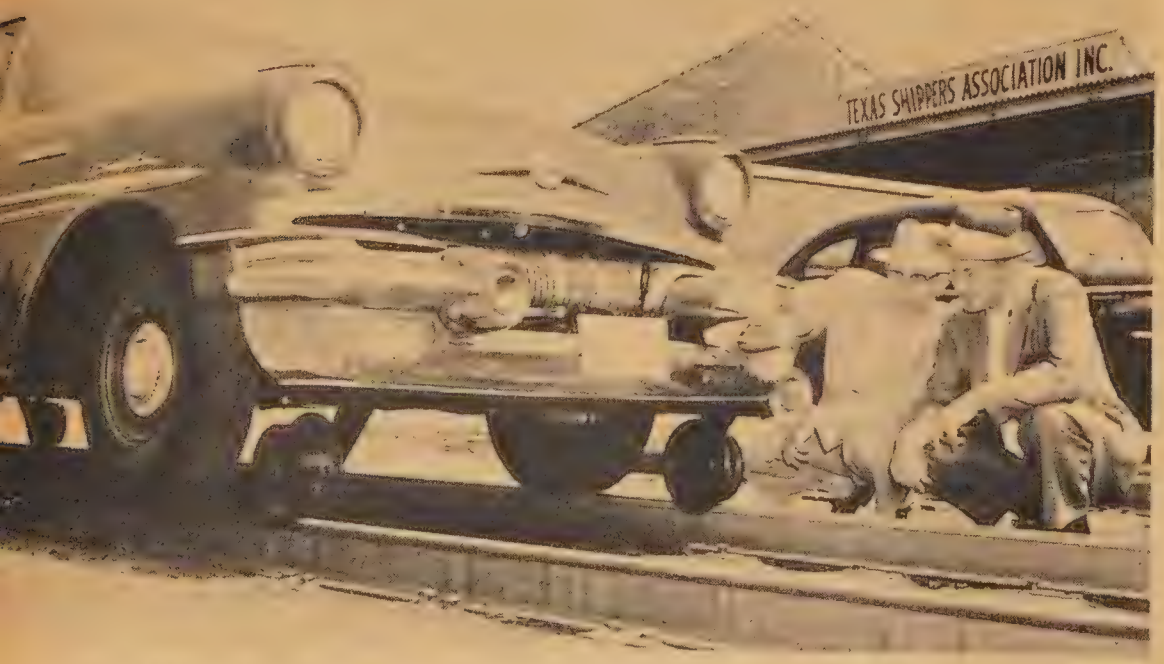
K. Mullins, former Louisville & Nashville section laborer, who is 103.

8 *A picture of an automobile rebuilt to run on rails appeared in your August issue. Do any such cars operate today? If so, in what capacity?*



French National Railroads' new diesel locomotive 060 DB-1. This type of power will be used on many lines where traffic is fairly light. Maximum speed is 80.6 mph.

Quontometer used in Pennsy test laboratories, Altoona, Pa., shows rate of locomotive wear indicated by small quantities of metal detected in samples of used diesel lubricating oil. Chart rolls out of recording unit within two minutes after oil sample is inserted between two electrodes. Earlier method took about five hours to complete.



The A34 Hy-Rail Inspection Car, used by Chicago & Eastern Illinois saves executives' time by allowing them to ride the rails or take a short cut via the highway. Fairmont Railway Motors, Inc., Fairmont, Minn.

Yes, mostly as inspection cars on small roads. But some are quite modern. For example, the Chicago & Eastern Illinois has a combination highway-railway car which it uses primarily for inspection purposes.

The vehicle is a standard 1957 Pontiac station wagon with flanged wheels which are raised and lowered by hydraulic power and held in position by a separate mechanical device which locks the steering wheel when used on tracks. The guide wheels lock from the outside to prevent inside errors when the vehicle is in motion. Top speed on tracks is 45 mph.

9 *What is a quantometer?*

An electronic device which within two minutes will measure and write its own "report" on the rate of locomotive engine wear by sampling lubricating oil. The quantometer has been adopted by the Pennsylvania RR. to control its preventive maintenance work on diesel locomotives and is expected to promote better engine performance and lower maintenance costs. It reacts to minute quantities of metal in the oil—as little as one or two millionths of a gram of metal in a gram of oil—and automatically records the amount found.

10 *How does railway mileage in the USSR compare with America's?*

About one third as much.

11 *I read that Minnesota's railroads pay state and local taxes totaling a dollar per year for every yard of track. Is this true?*

Yes, slightly more than a dollar a yard. Motor trucks are taxed only a small fraction of the railroads' total, although the latter have to build and maintain their own track, bridges, signals, etc., while motor vehicles roll on taxpayer-built highways.

12 *What is Canada's railway mileage?*

About 43,000. Canadian National has 24,278; Canadian Pacific, 17,055.

13 *Are any of the old ball-type railroad signals still in use?*

Yes, a few. We know of three on the Maine Central. One is used in the yards just east of Portland Union Station to advise engineers whether or not to move trains in or out of the terminal area. The other two are on the road's Mountain Subdivision tracks in New Hampshire, at Whitefield and Waumbek Junction, areas of light train traffic.

MeC and Boston & Maine tracks cross at these points, and crews of both lines signal each other that a crossing is to be made.

The ball signal that served Portland, Me., Union Station is now on display at the Baltimore & Ohio Museum in Baltimore, Md. Perhaps some reader knows of others still in operation.

14 *Why are blue lights used in New York subways?*

They indicate emergency exits to the street, and are always located between stations.

In standard railroad practice, a blue light is hung on a B.O. (bad-order car, needing repair) set on a siding.

15 *How many railroad employes own their homes?*

No current figures are available. A survey made years ago indicated that about 56 out of every 100 railroad families live in homes of their own.

16 *I'd like information on the earliest rotary snowplow.*

The first crude plow was invented and built in 1869 by Dr. J. W. Elliott, a Toronto dentist. It consisted of a wheel with four flat arms, rotating on a shaft in line with the track, designed to whirl the snow to one side.

In 1883, another Canadian, Orange Jull, of Orangeville, Ont., improved on this device by adding a second wheel that revolved in the opposite direction, acting as a knife or cutter. This second wheel was placed on a shaft revolving inside a larger (and hollow) shaft attached to the fan wheel. The Chicago & North Western tried out the Jull rotary in the winter of 1885-'86 but found it clumsy.

The first practical rotary plow was invented by Louis J. Bergendahl, a German-born American citizen, and made its debut on the Oregon Railway & Navigation Co. (now part of the Union Pacific), at Pendleton, Ore., in 1886.

17 *How many railroads are there in the United States?*

There are 628 operating companies, of which 421 are line-haul roads and 207 are terminal and switching companies.

18 *Which was America's worst train wreck?*

A head-on collision of two New York, Chicago & St. Louis passenger trains, Nos. 1 and 4 at Shops, Tenn., (near Nashville) on July 9, 1918, killed both engine crews, two other railroaders, and 95 passengers, besides injuring 171 persons. No. 4 should have waited at Shops for the arrival of No. 1, but failed to do so because Four's crew thought the other train had already come and gone. ICC report blamed company officials for failure to issue train orders at Shops, where double-track ended and single-track began.

19 *What was the Fairlie locomotive?*

A distinctive type used in England in the 1880's. It had a double-end body, two engines under one boiler, and a smokestack at either end.

Traveling bird houses? Not at all. This is a Skyworker, used by the Milwaukee Rd. to keep its lines clear of foliage.

20 (*a*) *Are Pioneer III cars being purchased for use on the Pennsy's Pittsburgh region?* (*b*) *If so, will they be RCD's or a coach type pulled by an engine?*

(a) Not now. Six MU-type cars, based on that design, have been ordered from the Budd Co. but will be tested first out of Philadelphia. If they are successful the Pittsburgh region may see them later. (b) Not decided.

International Bridge over the Rio Grande at Laredo, Texas, has a locked gate, marking division between nations. Shown is a cut of reefers that has been shoved precisely to this point by a National Railways of Mexico's switcher. Eventually a Texas-Mexican hybrid diesel will haul the carloads of perishables onto American shores, after Customs official unlocks gate.

Philip R. Hastings

NORTHERN PACIFIC
1801

Helpers on Mobase local at Tacoma, Washington: Northern Pacific engines Nos. 1801 and 1728 cut in ahead of caboose. Diesel switcher No. 425 behind.
W. Wilkinson, 4423 No. 11th St., Tacoma, Wash.

21 *Did the Union Pacific ever own any Shay-type locomotives?*

Yes, at one time they had Nos. 59 and 61 in service around Tintic, Utah. No. 59 was scrapped in 1949, and No. 61 was sold in 1948.

22 *If all the railroad tracks in the U.S. were extended in a single line and a train were to start at one end and travel at a speed of a mile a minute, night and day without stopping, how long would it take to reach the other end?*

What a question! There are 390,000 miles of track, and your hypothetical journey would take about 280 days.

23 *Who coined the phrase, "See America first?"*

The late Louis W. Hill—son of James J., "Empire Builder" of the Northwest —coined it in 1912.

24 *Many years ago my father read a newspaper account of a funeral train for a dog. He doesn't remember all of the details, and hopes you can refresh his memory.*

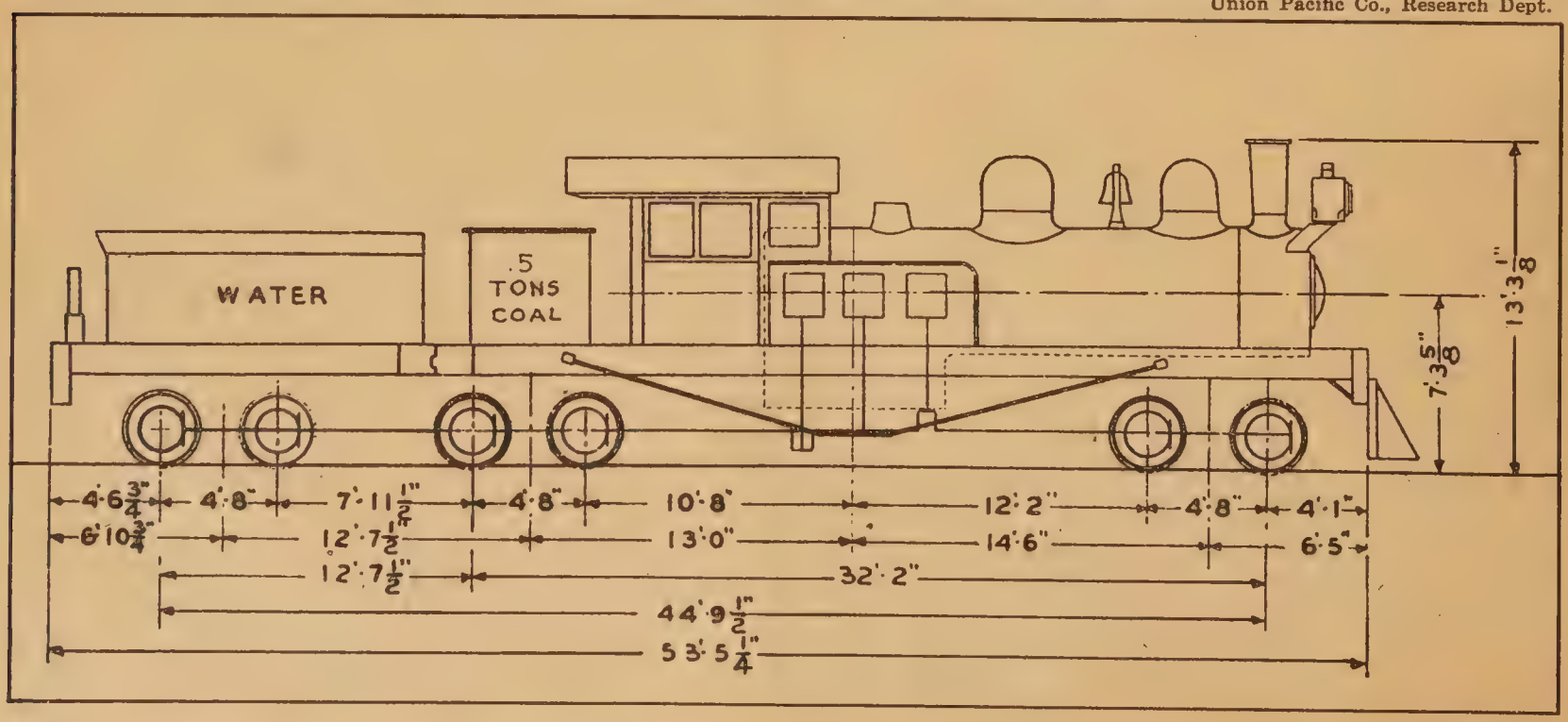
This item made headlines back in October, 1912. The dog was a $5,000 Pomeranian named Betty, and belonged to Herman B. Duryea, a millionaire manufacturer. Betty died at his Westbury, L. I., estate, but for sentimental reasons he wanted to have her buried at his place in Hickory Valley, Tenn. Since money was no object, he chartered a train from the Long Island Rail Road to which was coupled his own luxurious private car, carrying Betty's remains hermetically sealed in a satin-lined casket. Mr. Duryea accompanied the body to his Hickory Valley estate, where Betty was buried beside the grave of another pet dog.

25 *Have any of the railroads ever used steam-turbine locomotives?*

Yes Norfolk & Western has the *Jawn Henry,* a steam-turbine-electric; the Pennsy has a Class S-2 steam turbine, No. 6200, built by Baldwin, and eventually scrapped. Chesapeake & Ohio had two steam-turbine electrics which were intended for use on the *Chessie* streamlined trains. However, they proved to be unsatisfactory and eventually were scrapped.

Photograph taken, from a boat along the right-of-way fence, of a Frisco passenger

Union Pacific's Shay locomotive No. 61 was built by Lima in 1907. U.P. sold her to Oregon American Lumber Co., Sept., 1948.
Union Pacific Co., Research Dept.



E. L. Gilkeson, Osceola, Mo.

train plowing through flooded Osage River at Osceola, Missouri, about 15 years ago.

26 *What percentage of America's rail traffic is hauled by steam power?*

Freight, about 12 percent; passenger, about 5 percent. Three percent of the freight and 8 percent of the passenger business is hauled by electric locomotives. The rest is diesel electric.

27 *Why is the international railway bridge over the Rio Grande between El Paso and Juarez painted two colors, red on the Texas side and black on the Mexican side?*

Because it is jointly owned by the Santa Fe and the National Railways of Mexico and is painted by two separate gangs.

28 *Define the origin of the word* limited *as applied to passenger trains?*

The term was first used on April 20, 1874, when the Pennsy placed in service the *Washington Limited Express* between New York and Washington. It was an extra-fare train composed of Pullman parlor cars. An ad in the *Traveller's Official Guide* stated that it was "limited to a fixed number of seats," and for a time the term applied only to space restrictions.

Gradually, the word came to have a broader meaning. The present-day definition might be a passenger train bearing a distinctive name and operating at an overall speed of 40 mph or more for at least 200 miles, with scheduled stops at intervals averaging not less than 50 miles each.

29 *What was the disposition of the Espee's 3900 series 2-8-8-4 locomotives mentioned in your June issue.*

3800	Dismantled	7/29/53
3801	Sold to National Metals	3/4/55
3802	Sold to Luria Bros.	3/4/55
3803	Sold to Luria Bros.	3/4/55
3804	Sold to Commercial Metals	5/27/56
3805	Sold to Commercial Metals	5/27/56
3806	Sold to Purdy Company	7/11/55
3807	Sold to Purdy Company	4/8/55
3808	Sold to Purdy Company	10/3/55
3809	Sold to Luria Bros.	7/20/55
3810	Dismantled	7/14/55
3811	Sold to National Metals	3/4/55

30 *Will a railway ever be built through British Columbia to connect Alaska with the States?*

It is possible. Supporters of the "Alaska link" are active and the project is gaining momentum in Washington, reports Alex Darragh, 1314 Bedford Rd., Grosse Pointe Park, Mich. These plans are based on the need to develop Alaska's economy and to strengthen national defense.

Senator Warren Magnuson, vice-chairman of the Alaska International Rail and Highway Commission, favors a highway rather than a railway because it would cost less. Railway supporters say the present Pacific Great Eastern line could be extended up to Fairbanks. The B. C. government is committed to a railway to Alaska.

Readers should write to their senators, stating whether they favor a railway or highway project.

31 *What gage is considered standard on South American railroads?*

None. At least twelve are used. The principal one is meter gage (3 feet 3¾ inches). Some 34,000 of the approximately 61,400 miles of South American track are in this gage.

32 *Is it illegal to possess a railroad switch key?*

There is no specific law which covers switch keys. However, it is illegal to this extent: A switch key always remains the property of the railroad. It is merely loaned to the employe who has occasion to use it. Badge, switch key, ticket punch and lantern are referred to as "company jewelry."

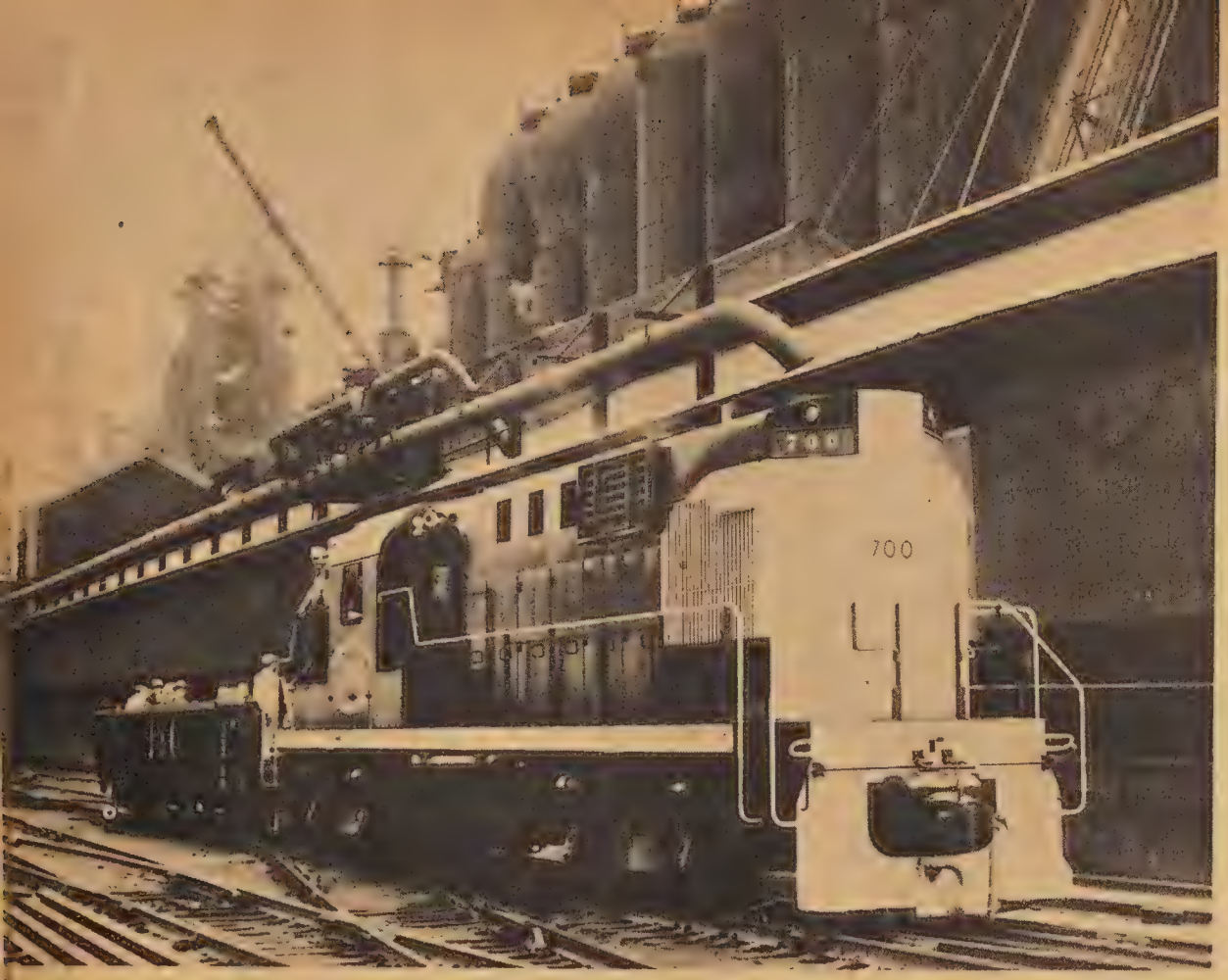
33 *Please furnish comparative figures on the drawbar of a N&W 2-8-8-2 Y-6 and a 4-unit GP-9 diesel electric.*

This is not possible since the characteristics of the two locomotives are so different.

34 *If a 20-car diesel-powered passenger train is making 70 mph on straight level track, how far will it travel after the dead-man control takes over?*

You are assuming that the diesel units are equipped with this type of

Coming aboard, Milwaukee Road brakeman R. T. Clemmons puts a rear-end marker light in place on the caboose.



Blast furnaces at the Jones & Laughlin Steel Corporation's Pittsburgh Works tower over the Monongahela Connecting Railroad's new ALCO locomotive. Photograph was taken during demonstration of the 1800-hp locomotive for directors of the railroad and Pittsburgh executives, riding in the specially-equipped gondola at the left.

installation. Some roads do not use it. Since the ICC does not insist, it is optional equipment.

As for the distance traveled after the dead-man control takes over, nobody knows exactly. Test results vary. A good guess is between 1,800 and 2,000 feet, based on figures given by A. T. Hitchcock, Chicago & North Western superintendent of locomotive operation, in *Locomotive Engineers Journal.*

Many factors must be considered, such as the number of diesel units, weight of train, number of cars equipped with roller bearings, direction and velocity of wind, and whether or not the rails are slippery or snow covered. Even after the dead-man control begins to function, about five seconds elapse before the brakes are actually applied.

35 *(a) Who sold the first Mallet-type locomotives to the old Mexican Central? (b) Where could I get a picture of one of them?*

(a) Baldwin Locomotive Works. (b) Inserting a request in our *Switch List* may produce such a photo.

36 *How many passenger-train timetables are issued in the United States?*

About 80,000,000 per year.

37 *Where is the world's longest stretch of CTC operated by a single dispatcher?*

In Perry, Iowa, the Milwaukee Road's Iowa division headquarters, where the road's recently completed installation controls 331 miles of track between Green Island and Council Bluffs.

38 *To what extent are railroaders given pass privileges on roads other than their own?*

These are technically known as "foreign" lines. Pass systems vary. Take, for example, the Denver & Rio Grande Western. If you have been employed less than five years continuously, you qualify only for cut-rate transportation on foreign lines. Five years or more entitle you to a maximum of one free foreign trip per calendar year; additional foreign trips at reduced rate. However, if you have more than ten years' seniority you can get from two to four free foreign trips per year, but only on Western lines.

On all roads, passes issued to an employe or dependent members of his family in cases of extreme illness or death will not count against the allotment of free passes. Neither Eastern nor Southeastern lines grant employes of other roads additional passes for student trips.

39 *Are there any Camelbacks left in active service?*

Yes. The Colorado Fuel & Iron Corp. has one in operation at their E&G Brooke Plant at Birdsboro, Pa., the last Camelback operating in the country. Formerly a Reading A-5 0-4-0 in the 1180 series, she is the plant's engine No. 4.

RUNNING EXTRA

WHEN you answer a question requested in *Information Booth* or *Running Extra* please mention the item number and date of issue.

A STRANGE request comes from Mrs. Vivian Jane Dietrich, 6211 32nd St., N.E., Seattle 15, Wash.

"I was born in Minneapolis on Jan. 19, 1906," she writes. "I have been told that my father was a railroadman named Brown and that when I was a few months, or a few years, old my mother advertised in *Railroad Man's Magazine* (now *Railroad Magazine*) for some railroad family to adopt a baby girl.

"I was adopted—legally or not, I don't know—by a railroader, Earl F. Husahne, and his wife, but I did not learn these facts until after both of them had passed away.

"My foster father worked for the Milwaukee Road. So did my husband, L. W. Dietrich, who died last May. Will someone who has the earliest issues of the magazine please look up the adoption ad for me and, at my expense, send me a photostat of same?"

Editor's Note: We hope some reader will answer this request and then tell us about it. Our own bound volumes for that period do not include the advertising sections, which in those days were segregated from the reading matter.

It is possible, of course, that the adoption request was printed as a news item or a reader's letter. Perhaps the ad appeared in the *Railway Gazette* or some other publication.

INFORMATION on antique switch lamps (item 10, Oct.) comes from a member of the Southeastern Railroad Museum, Inc., Hammond, La., who states a lamp with four lenses can be made with all four sides in the same color—green, red, clear or yellow, since they can be removed with a screwdriver.

ROBERT WARREN, JR., Boston & Maine brakeman, referring to Item 17, Oct. issue, says he started railroading when he was 18, at which time the B&M's oldest active engineer was a man who later retired at age 82.

INFORMATION on the Lodi RR. (later part of the NYS&W) and its motive power is sought by Raymond Bassey, 360 Grove St., Oradell, N. Y.

MANY readers have commented on George Glazehook's question (Oct. *Running Extra*) regarding the blue boxcar No. 77648, "BM," seen in Mexacali, Mexico, which, of course, belongs to the Boston & Maine.

A HISTORY of the Okmulgee Northern Ry. and locomotive No. 5, *Tommy*, is wanted by Paul Rehn, Lima, Ohio.

JOHN VAGO, 164-13 73rd Ave., Flushing, N. Y., wants a history of the Newburgh, Duchess, and Connecticut lines that ran from Beacon to Pine Plains and from Clove Branch Junction to Clove Valley, Duchess County, N. Y. He is particularly interested in abandonment dates and types of power and rolling stock.

ADDITIONAL information on red locomotives (item 42, Oct.) is supplied by Tom Mohr, 2250 W. Giddings St., Chicago, Ill., who says the Alton 4-6-2's, Nos. 5290-5299 also were painted red.

W. H. TILLEY, 3701 Speedway, Austin, Texas, asks who built and owned a certain collision-proof private car that resembled a steam boiler, complete with windows and observation platform. He saw it on a siding at a small Iowa town about 1911, when it belonged to the Leo Blondin Show. (Blondin was the man who walked a tightrope over Niagara Falls.)

INFORMATION on narrow-gage saddle-tanker No. 18, requested by Harry Shannon (Oct. issue) is supplied by Hugh Stephens, 223 Trenton Blvd., Sea Girt, N. J., who says she ran between Camp Dix and Pointville, N. J., hauling troops and equipment during World War I, after which she was out of service. Early in World War II an attempt was made to revive the line and its equipment. However, the Army found it cheaper to move troops by truck, since the locomotives at Camp Dix were too far gone from years of neglect. The engines were 0-4-0 dummies of the type known as "trench locomotives." An abortive attempt was made to operate the line but tracks and equipment were scrapped.

In the land of the Shamrock: this 1,200-hp diesel-electric locomotive is part of Coras Iompair Eireann's (Ireland's Transportation Company) thirty-million-dollar modernization program which calls for the complete dieselization of rail services. It also covers improvements in motor coach transportation and hotel accommodations.

Saddle-tank switcher B-4-A, built in 1910, is the last Reading steam engine left in operation. The engineer is a one-man crew who operates and fires the locomotive.
Gene Gentsch, 1797 Lennington St., Rahway, N. J.

Toledo Electric Railway car 9, with Miss Karen Gearig in the front seat.

Private Trolley Line

by WILLARD B. EDSON

OFFHAND, you wouldn't say Toledo, Ohio, is a trolley-car city. Not since '49. But don't be too sure. If you happen to be passing my home at 1008 Eton Road on a bright Saturday or Sunday afternoon when there isn't too much snow on the ground you can see a juicefans' paradise. I refer to the privately owned trolley line in my large yard. It has six stations, a car barn, and a 416-foot loop of two-foot-gage track plus 65 feet of siding and car-barn track.

You can hear the clang of a gong, the squeal of flanged wheels taking a curve, and shouts of merriment from children and even adults. That, my friends, is known as the Toledo Electric Railway.

Where did it come from? Roll back twelve years. In April, 1946, I hired out as a bookkeeper for a company that manufactured cement blocks. They had been using a little railroad to wheel those blocks from the plant to the storage yard, but when I arrived the hauling job was being done by rubber-tired lift trucks. The four-wheeled cars had been retired, the track torn up, and the discarded rusty rails lay piled in the yard.

I wondered what would happen to those rails and I discussed it with other railfans. That fall when the boss spoke of selling them for junk, I had a question ready:

"How much would you want for that old steel?

"Well," he said, "I have 1470 feet and I figure it's worth at least a dime a foot as scrap metal. Why do you ask?"

"I'll buy it," I replied. "Some of us fellows want to build a narrow-gage railway just for fun. We have a piece of land big enough to lay the track on."

My employer nodded. "It's a deal. Give me $147 and cart the stuff away."

The following Saturday, October 12th, several of us fellows loaded the rail on a borrowed trailer and towed it to the new location at Bapst and Bonepart roads. From then on we combined toil with fun. We'd meet on Sunday mornings, work till noon, and quit for the week. From time to time new fellows appeared. Each one was assigned a task, but some found it too hard and never came back after their first day.

We cleared the land with painfully slow effort. We did some rough grading through the sand ridge and scrub oak from which the line eventually got its name. All during 1947, we spent Sunday mornings at grading and laying rail, using as ties everything that resembled four-by-fours. For the ballast we bought several loads of cinders, filling in the new low places with sand.

The line kept growing until we had some 300 feet laid back to a gully. Over this track we pushed old cement-block cars back and forth to amuse the boys and girls of the neighborhood. We built a 50-foot trestle three feet high across the gully. First we drove old railroad ties into the earth as piers and crossbeams. Then we bought rough-sawed oak stringers and additional ties to complete the decking. At the Bapst Road end of line we laid out a stub switch and a siding. Between the two tracks we made a passenger platform from an old Wheeling & Lake Erie box-car door, later replacing it with a cement block.

By January, 1948, things had progressed so far that we met at a member's home, chose a name for our railway, the Sandy Ridge & Live Oak, and appealed to the Toledo Railfans Association for financial backing. Donations ranging from $10 to $50 apiece dribbled in. Two men in our group made up the balance out of their own pockets. The line was then 700 feet long.

We had six stations: Mowery Crossing, Sandy Ridge, Live Oak, Long Bridge, Willow Glen, and Scott Park. At this stage we needed rolling stock and we bought nine four-wheel cars. Five were in first-class condition, but two had bent frames while the other two were damaged so badly that we acquired them mainly for spare parts.

Meanwhile, in my garage, we converted a single-truck cement-block car frame into an open bench passenger car, No. 23. It is 11 feet long, including a two-foot platform at each end, and is 5 feet 11 inches from rail to trolley boards and 4 feet wide over the running boards.

On the floor of the passenger section we placed three former seat cushions from Community Traction Co. cars,

Toledo Toonerville. We see Harry Darst of Detroit in the work car, our author at the controls of No. 9, and car barn in the background.

Partial view of back-yard trolley line, showing both cars, track along Sloan Road, and Hannah Junction.

800 series. We built one wooden bench on the front platform and another on the rear for passengers, motorman, and conductor, and on the front platform we installed a dummy controller made from an old brake handle.

We constructed a trolley base from a remodeled truck castor and two compression springs. Being made with ball bearings, the castor has an excellent swivel. We turned out a copper trolley pole on a lathe and attached it to a piece of half-inch pipe. Then we painted the vehicle orange with a green trim. Oh, yes, we installed a warning gong on the roof in front—a bell with a cord running through the car for the conductor to signal the motorman. Material parts cost only $29.

One hot summer day in 1948, just as the car was completed, the city sponsored an *Aquarama,* with a procession through the downtown section. We loaded No. 23 on a decorated trailer and had her pulled over the parade route. Two fellows were garbed like trolley men of long ago, a lady rode as a passenger, and five pinup girls in bathing suits added glamour to the float. Judges gave our outfit second prize.

THE NEXT day, July 27th, we put the car on her track for the first time, in the presence of 60 visitors. We gave rides by pushing her to the top of the grade at Live Oak and letting her roll down to Bapst Road by gravity. There being no brakes on the car, we used foot-braking to stop her.

Each year thereafter family picnics were held in the grove by the track, and at least once a summer a Detroit contingent would come to Toledo for a Sunday of work and play on the Sandy Ridge & Live Oak. We appreciated their help.

A builders' supply house that went out of business in 1949 had among its assets several thousand feet of 12-to-16-pound steel rail. Two of us loaded about a ton of this rail on a truck and drove out to the Sandy Ridge site. We thought then that we had all the rail we would need to extend our line. Later, when it was too late to get the

ALL THESE PRESENTS JUST FOR ME?
I LOVE YOU BOYS, REALLY! BUT...YOU SEE...
?
SMELLS GRAND! PACKS RIGHT! SMOKES SWEET! CAN'T BITE!
A PIPE SMOKIN' MAN ALWAYS WINS WITH ME!
IT'S SIR WALTER RALEIGH - NATURALLY!
SIR WALTER RALEIGH'S BLEND OF CHOICE KENTUCKY BURLEYS IS EXTRA-AGED TO GUARD AGAINST TONGUE BITE. XMAS-WRAPPED ...IT MAKES A PERFECT GIFT.
It costs no more to smoke the best!
SIR WALTER RALEIGH
SMOKING TOBACCO FOR PIPE AND CIGARETTES

Willard B. Edson drives a gilded spike to make the completion of 416-foot loop.

rest, we regretted not having bought the entire lot when it was available.

Meanwhile, in 1948, we started to electrify, using 3/16-inch copper wire for overhead and 16-foot wooden line poles. We supported the wire with brackets made of ¾-inch water pipe and wire bracing, securing hangers for the wire gratis from the Community Traction Company. We laid the wire in the grove, peening over to hold it.

Someone donated two one-third horsepower motors and a gear box with 15 to one reduction. We hooked up a rheostat to the controller and installed a reversing lever. Power for the line came from a 110-120 volt DC war surplus generator of three kilowatt capacity, driven by a five horsepower Briggs & Stratton engine. We installed two brakeshoes, cast in a foundry, on the front pair of wheels with connection to the front-platform brake handle.

Because our parts and mechanism had to be custom-made, as cheaply as possible, we often had breakdowns of shaft, motor, or rheostat. Our grade gave us the feeling that the car was underpowered. Anyhow, the work went on. We strung wire to Willow Glen and pushed rail forward to Scott Park, where we installed a spur for a car barn, and in 1951 we built a switch point.

That year we went to work on the car barn; but with funds low and help scarce, winter set in before we could roof it over. We kept the car in the gaunt unfinished barn and drearily watched the rain and snow pelt it during the cold season.

Spring arrived in due time. We towed the winter-battered car on her own wheels to my garage. There we tried again to rehabilitate her motor system but in vain. Months passed. Under a canvas shelter, the car stood outside my garage all winter. We were more than glad to see the first robin of 1953.

April came. Phillip O'Neill, chief engineer of the Community Traction Co., inspected our Toonerville and asked if we'd exhibit her in the Ohio Sesquicentennial Show at Walbridge Park. We agreed. The traction company borrowed our car because it no longer had any streetcars of its own. So Mr. O'Neill had the car reconditioned with new seats, renumbered 9, and repainted at the CT barns.

Then for a whole month No. 9 stood on public view at the Sesqui. Early in July she was brought back to her new home at Eton and Sloan roads, where I live, for we were shifting our base of operations and renaming our project the Toledo Electric Railway. At first we laid 100 feet of track at the new site and in time we built a loop there. Our Sandy Ridge line is deserted.

We acquired a new car-motor which operated on 110 volts AC at 18 amperes and a two-hour overload. It is a two hp. single-phase, 60-cycle, 1740-rpm. General Electric motor. This we connected with the axle through the previously-used sprocket and chain. Utilizing power from an extension cord out of my garage window, we ran the car all summer, loaded with fun-loving passengers.

But our hearts were set on an overhead trolley wire. So in 1953 we bought six line poles—each a used boiler tube 20 feet long, 3½ inches in diameter—and planted them in concrete and welded brackets to them. We erected these poles in such a way that the wire would hang from the bracket nine feet above the rail.

Then, with the help of an old friend, Harry F. Darst of Detroit, we acquired 14 wooden line poles, each 16 feet long, 4 inches in diameter, and 140 four-foot cedar ties, which Harry had slabbed flat on two sides to a four-inch thickness. Our next move was to buy and erect a ready-built garage (car barn), with a doorway seven feet high that barely allows room for the trolley pole to ride in and out on the wire. The building is large enough to house two cars.

ONE Saturday in July eleven families from Toledo and Detroit held an all-day picnic on our trolley line. During that time they laid about 100 feet of additional track, including a difficult curve, on ties previously creosoted, and strung wire to keep pace with the advancing track. Harry agreed to build another car for us in Detroit.

Later, he brought down the trucks which he had built from car frames and tried them out. The tests were satisfactory. As summer swung into autumn and the red and yellow leaves swirled around, we laid the rest of our rail and built a stub switch to get the car into the barn. No longer did it have to be covered with tarpaulin to withstand the winter storms. We pushed the car indoors from the main line. It was not until the following spring that we strung wire into the barn.

Needing more trackage, three of us fellows armed with crowbars, hammers, a claw-bar, and wrenches pulled up 400 feet of rail from the old Sandy Ridge line, and, at intervals, hauled it to my yard.

May 8, 1955, was a gala day. The finished car arrived from Detroit. It was a flat-bed work car with a cab over one truck. The cab is built of 16-gage aluminum with a removable door and

nine windows. At each end of the car is a brakeman's step. The motive power is a 2½-hp., one-cylinder, Clinton engine with a Dodge transmission. This is used for forward and reverse motion with a three to one reduction. An automobile emergency brake-drum provides good braking from a brake-handle atop the controller, while an automatic clutch on the motor shaft works with centrifugal force when the engine speed reaches 1700 revolutions per minute. The car has a headlight, marker lights, and destination lights at both ends, operated from a trolley pole.

On June second we began operating our original car out of the barn under her own power. It was a happy occasion. That month we extended the track to the platform and station sign of Le Sueur and on July third the glinting steel reached Sloan, beside the road. Half a dozen grazing sheep in Fred Le Sueur's pasture provided a rural setting.

In August Harry Darst and I spent three days of our vacation completing the loop and stringing the wire. We built a sharp curve and a stub switch to connect with the end of the originally-laid rail, which provided a siding, known as Hannah Junction, for trolley meets.

Upon completion of the loop we decided to drive a gilded spike. We mailed invitations and the *Toledo Blade* gave us so much publicity that at least 100 people assembled on the afternoon of September 23rd for the ceremony, after which there were rides for all.

An added attraction was the presence of a dinky line trolley with portable track and wires, which Norman Muller brought over from Lorain, Ohio, for the day's celebration. Incidentally, Norman operates a traction company in the yard of his home. He also has on his property one of Cleveland's last streetcars, in which programs are given for blind and crippled children.

Our 416-foot loop boasts six stations, including the start and finish at Derolcon, a word derived from the names of my daughters: Deanna, Rose, and Elsie. We worked out schedules with the two trolley cars running around the yard in opposite directions and having meets at the two sidings.

Last year we installed a two-way telephone system on the Toledo Electric Railway, with one phone in a box attached to a pole and the other in the car barn. Both are relics of the Ohio Public Service Company.

We also built an additional siding 24 feet long, enough for two cars, which we may extend to 54 feet, the additional footage to be a home siding for a new passenger car now being built. This siding includes an electrical spring switch, unlike our two stub switches. The work car, which began running with a gas engine, is now electrified with a 3-hp. motor.

Each year we get hundreds of visitors and next season we expect many more. With two yard lights and the car-barn lights fed from the trolley wire, we sometimes continue running until very late on pleasant nights. There is no charge to passengers, although we do have a fare box for voluntary donations to the cost of operation. ●

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(APPROVED BY THE GOVERNMENT FOR KOREAN VETERANS)

Name_____ Age_____

Address_____

City_____ Zone_____ State_____

GODS OF HIGH IRON

A RAILROAD classic. copyright 1939 by Popular Publications, Inc.

by Harry Bedwell

He found himself feeling romantic over a doll who treated him coldly.

Over the Years, Eddie Sand Was Pushed Along the Boomer Trail

by Vague Relentless Powers and the Girls Who Crossed His Path

AFTER the hustle of more enterprising regions, Eddie Sand found the Deep South restful. Eddie was a railroad telegrapher. A boomer, in fact. One of the roving fraternity which, in bygone days, almost invariably headed south for the winter.

Working the extra list took him to small towns that drowsed all day and most of the night. Even the wheels clicked idly at rail-joints. The dispatcher on that division sent his orders in charming, indolent Morse, while the trainmen were polite and seemed never to be in a hurry.

This might be the Big Rock Candy Mountain, Eddie mused, but he regarded it with suspicion. In time, however, he began to act that way himself. He sank into the warm, lazy atmosphere, forgetting that dim outer world where engineers yelled their heads off when you jeopardized their schedules.

Then one day a mosquito bit Eddie and he noted with some surprise that he didn't resent it too much. He yawned a lot, too, and he stopped taking the brisk, explorative walks he used to like. Then he caught himself feeling romantic about a honey-haired doll who treated him with utter indifference. It was not at all flattering to his ego.

The climate, Eddie decided, *must be doing things to me.*

That night a locomotive whistle calling in the night from the piney woods filled him with panic. Its trailing shrill cry in the quiet darkness was a summons from the gods of high iron, who are ever restless. It aroused a flicker of the old willful urge to migrate, warning him to start drifting again before the eternal tranquility trapped him forever.

So he wandered west by north, traveling leisurely by an indirect route. At length he tired of the effort required to unload from a local passenger train at a division point and to negotiate further gratis transportation from the next conductor headed his way. *Work,* he thought, *is what I need.* He applied to the chief dispatcher for a job, and got it.

When he dropped off the train at a place called Maneca, he was vaguely aware that he might have been precipitate in accepting the night job there. Besides the station, the town invoiced a saloon, a general store, a livery stable and corrals, a hotel with a bar, and a few houses. Beyond and all around lay Texas prairie baking under the hot sun.

A stock train, which evidently had just completed loading, pulled out behind the local passenger that had brought him. Cowmen stood on the rear platform of the retreating caboose and jeered at more cowhands mounted on horses and seated on top of the loading pens. One rider, likely incensed at some indignity cast from the caboose platform, gave chase on a cream-colored horse, swinging a lariat.

Eddie hadn't seen so much animation since the Deep South had engulfed him. He upended his sturdy leather suitcase and sat on it. Then he blinked. If that redheaded rider astride the Palomino wasn't a girl, he'd lost his sense of anatomy. A well set-up female she was, too, with bulging breasts and broad hips and flecks of gold in her hair.

She rode toward him with obvious interest. The horse reared under her hand and approached on its hind legs, its front hoofs pawing the air. Eddie stood up, and the horse went into a four-legged dance.

"Howdy, stranger!" said the girl. She checked her steed and eyed with approval the boomer's slim height and store clothes.

"I'm proud to meet you," Eddie said, taking off his hat. "What else can you make that horse do?"

"Lots," came the answer.

She leaned from the saddle and

bunched her scarlet handkerchief in a bright puff on the ground beside him. The horse trotted up the dusty street, then wheeled. Suddenly it launched itself at Eddie, but swept past him. The girl dipped low, head almost to the ground, snatched the kerchief, and rolled easily back into the saddle. Then she raised a lariat and rode back toward Eddie.

The brass pounder felt certain then that he had erred badly in interrupting his westward migration at this spot. The noose settled quick ly over him and his upturned suitcase. It tied the two together with a sharp tug.

Eddie expected the worst. But before the slack drew out of the rope, the horse reared in a plunging stop. The fair equestrienne loosened the loop with a flirt of the wrist and hauled it back to her. Then she slid from the saddle.

Her eyes were green and mischievous; her smile was dazzling. She wore blue jean pants, copper-studded. Her boots were stitched with bright designs; her spurs were big and jangling. She was, indeed, a hearty girl. And good-looking. Eddie licked his dry lips and grinned.

"Listen," he said. "You and that hoss ought to be in a Wild West show. They'd pay real money for your act."

"What'd I want in a Wild West show?" she flung back. "I got one right here. Paw owns this cow outfit and that's better'n a show."

"Well," the railroad man considered, "don't you ever want to get out and do something else? I never could stay long in one place. You get to know too much about it."

"When do you figure on leavin' here?"

"I'm stuck here for a while. I'm the new night operator." He nodded at the depot.

"A railroad telegrafter! I'll bet that's fun. And workin' night? I'll be in to see how you do it. Kate Streeter's my name."

"Sand's mine. Just call me Eddie."

She slipped off a gauntlet and shook hands and said:

"Eddie, we're gonna be good friends."

The young man nodded dubiously and watched her ride away to the pens. Then he went to work.

NOW he was back where they shoved the traffic along.

But his lethargy continued. Kate had a habit of riding in at evening three or four times a week, to chat and to watch him work.

When he had leisure, the cowgirl would make him sit beside her on the baggage truck just outside the window, where he could hear the sounder, and tell her of the places he'd been—the cities, and the timber country of the Northwest; the thickly-populated sections of the East where the four tracks ran, and the green valleys of California. The Texas moon is inspiring, and Eddie bragged. He made vivid pictures of

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the careless road he'd come by to Manteca. And Kate absorbed it all in wide-eyed wonderment. She was charmed.

But after ten days, her robust mind took a firmer hold of things. "Wanderlust is a lot of fun," she agreed, "but where does it get you?"

That question usually irritated Eddie. It was like trying to explain why you wanted to climb Mt. Everest or didn't like spinach. But he was still in a state of semi-coma, and he tried to get across to her the lift of far places, the thrill of new adventures.

Kate wasn't impressed. "Eddie, she said; "you've been on the loose long enough. It's time you settled, and this is one damn fine place to do it."

He glanced at the prairie, shook his head.

"Ranchin' ain't bad when you've got a big outfit," she insisted. "You'd fit in swell."

His sense of caution wasn't very acute that night. Instead of crushing the idea he merely grinned and said the cow'd likely try to eat him—he'd look so green on a ranch.

Then one evening Kate's pa rode in alone. Old Man Streeter looked like a piece of dried-out rawhide. He wore his gun and he had a bleak eye, but he tried to be genial.

"Kate's been talkin' a lot about you, young feller," he said as he sat down in Eddie's chair and hooked his spurs onto the telegraph table. "Seems like she thinks a heap of you."

The boomer answered cautiously that Kate was one of the grandest girls, in her way, he'd ever met.

"I'm glad to hear you say that, son," said the cowman. "Kate's taken a set to you and she generally gits what she wants. We have a big outfit and a good many young fellers has tried to tie into it. But Kate ain't interested in the others. She's set on bringin' you in. But she thinks mebby you're backward about askin' her, 'cause she's got so much to offer. So I just rode in to show you our cards. I couldn't stand to see anybody break my gal's heart. Mebby you'd better speak to her."

Eddie was suddenly coming out of the coma he had drifted into down there in the Deep South.

"Thanks, Mr. Streeter," he said. "I'll give it some thought."

He did give the matter some thought. As soon as the station agent showed up in the morning the boomer voiced what was on his mind.

"I've never done this before—left before I was relieved," he explained. "But there's always a first time, and you oughtn't to hold this against me." He stared at the desolate landscape. "I just couldn't take it. I'm leaving on Twenty-nine this morning. I'll write you where to send my pay check."

The agent, who was grizzled and wise in the game, leaned against the telegraph table. Mirth exploded from him in loud guffaws.

"So Kate finally fell!" he said at last. "That's gonna make it bad for everybody in this section. With you gone, she'll likely tear up the place and toss it out the window."

SIX WEEKS later, in a high pass in the Rocky Mountains, Eddie Sand received his pay check and a letter from the agent.

"It's worse than I figured," the agent wrote. "Kate swears she'll trail you down. If I was you I'd move a good deal farther away from here, and stay there."

Eddie hadn't ever before thought of wintering in the North, but storms and deep snow seemed to promise peace of mind, so he promptly headed into the Dakotas.

Spring brought the usual urge to migrate. He drifted westward. By summer he had ventured into California. He felt hunted, which irritated him. His disposition was sour, his judgment warped. Otherwise, he might have shied away from a job on the West Coast Lines.

He had reached for the doorknob that would let him into the dispatcher's office, when the door flew open in his face and out rushed a stalwart man waving a time check.

Eddie's eyes opened wide. It was Joe Walsh, a fellow brass pounder whom he had last seen on the Illinois Central's four tracks at a time when Joe was disputing a trainmaster's interpretation of Rule G, the rule against liquor. Joe had won the argument but lost his job.

He held the time check before Eddie's face. "See what they done to me? You don't want to work for this outfit. Listen, they got a super who's rawhidin' this division to death. Just a damn snooper! Better stay away from him!"

Eddie considered. "I guess I'd better look this situation over. You run along, Joe, and find another drinking partner."

The dispatcher's office was muggy with revolt. The chief needed operators, but was glum about it. Eddie talked with a trick dispatcher who looked down his nose and muttered darkly.

"Keep yourself well organized, boomer!" he cautioned. "They've just sent us a super from Texas, and he rides 'em rough."

Eddie winced. "I hear he prowls."

"He does," the trick man said. "You're likely to find him lurking under your telegraph table."

Later, the conductor of the local which took Eddie to his new job inspected his pass critically.

"I hope you don't need the work," he said. "You won't have it long."

Clifton, the station to which Eddie was assigned, could have occupied one city block without crowding, except for the fruit packing sheds and the canning plant. The station force wasn't happy about the new super. Bill Fry, the night operator, had fallen under his displeasure and wasn't allowed to take the day job.

Summer traffic was heavy. There was endless billing, and all through the day the dispatcher demanded the operators' time for long periods. Large batches of Western Union messages had to be handled. The climate was hot and the shippers waxed impatient.

Almost every day brought a harsh, complaining letter from the superintendent. Most of his fault-finding

had no basis, but the job of checking records for the information he sought, added to the rush of other duties, was irksome. Eddie sized up the official as scrawny and prying with a long, probing nose.

"R. N. Stuben, Supt.," the man signed himself, with a heavy stub pen and a blustering disposition. That signature looped across the bottom of scolding letters became an ingrowing pain in Eddie's neck. He grew grim.

A SERIES of misadventures that befell the Clifton station took over Eddie's brooding thoughts. The agent, angling for a change, had an offer to go into the freight traffic manager's office and was ordered in to headquarters for a preliminary interview. He, in turn, got from the superintendent a pass and permission to be away from his station long enough to find out if he wished to transfer jobs. But the super would send no one to take his place. Eddie and the night operator must carry on the job between them for at least forty-eight hours.

The night man received the news with suspicious calm. If Eddie hadn't been so busy and harassed, he would have noticed Bill Fry's ominous silence and might have guessed the night man was vindictively waiting for the right moment to pay off the super for degrading him in the service. Eddie was to be sorry he'd missed that warning.

The agent left early one morning, leaving Eddie swamped in a turbulent tide of business. Every minute of that long, hot day his person was demanded in a number of different places at the same instant. It took clever and concentrated attention to each of the thousand details of running a heavy station alone to keep the work moving without overlooking a car of perishables, or tying up traffic, or muffing a train order. He also had to pacify shippers and keep passengers contented. At no second was he doing less than three things at the same time.

Bill Fry was to relieve him at five p.m., and Eddie planned to return after supper and work till midnight or so, catching up on reports to the auditor. But the gods of high iron had another blow in store for him.

At dusk in a lull of traffic, Eddie went in hurried search of Bill. He found the missing man in a bistro. Bill had a glib explanation.

"I met a friend who once married my first wife. He bought a drink. Then we got into an argument, and I bought a drink. Such things have been happening all afternoon. Now, could I help it? Want me to come over and relieve you for a while? Listen, boomer, you call up old R. N. Stuben and tell him where to go."

"Okay," Eddie conceded. "But if you change your mind and sober up, come back and give me a lift. Twenty-four hours a day is tough on one guy. Also, it'll be midnight on the ocean if they hit you with Rule G."

Eddie brought a flock of sandwiches and a gallon of hot coffee and went back to work. He expensed waybills, wrote up the cash book, and juggled with the daily balance sheet during the time the dispatcher and local freight and passenger trains weren't demanding his entire attention.

The human machine does run down with continuous service, and around two a.m. vitality naturally begins to ebb. But at that hour, when Eddie was drooping, he was violently shocked into alertness. The inflamed night operator returned to the station, babbling his tale of woe. He wasn't gonna work, he proclaimed, but he was gonna take the scalp of Superintendent Stuben and hang it on a weeping willow tree. He brought along the friend who had married his first wife.

Eddie's assurance that the super wasn't anywhere about infuriated the night man. He believed the brass hat was hiding from him. He went out and picked up a shovel that the section foreman had carelessly left on the platform. Using the flat side of it, he broke the bay window.

When the shattered glass began to shower down upon him, Eddie

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slid under the telegraph table and let it rain. Bill Fry's friend had a pistol and he tried with an unsteady hand to shoot the light out of the semaphore. Presently the town marshal got out of bed and came and took them both away.

"Maybe I should have stayed in Texas," the boomer reflected, "even with Kate. But no," he groaned, "maybe not."

HE DIDN'T get more than two winks of sleep that night, dozing in his chair. The next day was hotter and fuller of vexations. Patrons seemed more arbitary, and Eddie took time out to explain to all why the front windows were broken. The dispatcher wasn't amiable.

A circus poster on a barn across the track that he had barely noticed before irked him. It showed a robust and redheaded damsel in cowgirl rig, and from the distance and in his state of mind it reminded him of Kate. As the hectic hours milled by, the fretful feeling increased that the gods of the rail were maliciously dogging him with something he wanted to forget.

That afternoon, the town marshal reported that Bill Fry was still incarcerated and would so remain till he sobered up and stopped trying to destroy the jail. Somebody had sneaked a bottle in to him, and Bill was on the second lap of his bender.

At evening, Eddie stocked up again with sandwiches and Java and prepared grimly to toil through another night.

Traffic was brisk, with stock trains running in sections, and hotshot fruit blocks that were making pickups all the way down the valley to be nursed along like whimsical officials. There were two sections of a circus that had been delayed in a jam caused by the dispatcher giving a slow freight time on a fruit train instead of a meet. Eddie was nearly tearing out the sounder in an effort to get them back on their schedule so they wouldn't be late reaching the county seat beyond Clifton.

At eleven o'clock the night operator showed, but just for a moment. His face looked as if it had encountered some blunt object several times, and he was sick and sobering.

"I'm leaving on the first train, either way," he stated. "Town marshal says so."

Bill crawled aboard the caboose of a southbound. Eddie was thoughtful. When the gods are set to chasten you, they don't relent till they have really whipped you. He let the afflicting hours ramble on and tried to keep up with the work.

By midnight the figures in the cash book began to blur. The boomer checked with the dispatcher to find if he couldn't take a little rest. He found there wouldn't be anything through Clifton till 1:50, when the two sections of the circus train were due by. The dispatcher said Eddie could nap if he was sure his call would awaken him. Eddie replied, "I'm going to sleep whether it does or not."

He took off his shoes and stretched out on the telegraph table with his ear close to the sounder. He dropped instantly into a bottomless black hole.

But no telegraph table is soft enough to sustain sound slumber. You get restless trying to find a bland surface which your bones will dent. Tired as he was, Eddie awakened at once when the dispatcher called him at 1:42 and signaled sharply, "31 copy 4." A passenger train was in trouble, and the DS had to make a quick shift in meeting points between it and the two sections of the circus special. He was in a tearing hurry, for the circus faced another delay and there would be trouble about that.

Still only half awake, Eddie got down to manifold, found his stylus, and started to put on his shoes, while the dispatcher called another station to copy the same order for the passenger train. But there was a hitch. The operator, evidently also napping, was hard to arouse. The dispatcher called him with the snap that warned of retribution.

Eddie got one shoe on, and yawned and tried to arouse enough resolution to put on the other. He was sitting up to put it on. He was sitting on the table, holding the shoe in his hand and considering it sullenly, when the first section of the circus stormed to an impatient stop under the semaphore's red eye.

A MAN stamped through the waiting-room and slammed impatiently into the office. That would be the conductor of the first section, Eddie decided, full of bad language at this further delay. But at that moment Eddie couldn't feel any compassion.

The man gazed at the shattered windows. "What in hell has been going on here?" he demanded.

It wasn't any of the trainmen's business what had been going on there, and no conductor could tell Eddie Sand anything at all that night. The restrained resentment of forty-some hours of sleepless toil and conflict can build up a pressure.

Eddie popped off. He told the man exactly and explicitly where to go. Then he put a witch's curse on the stranger and all his seed.

"They make guys like you division superintendent in hell," he said in closing, "and name 'em Stuben."

The man gasped and strangled. But Eddie paid him no further heed, for at last the dispatcher had aroused the other operator and had started sending the train order. Eddie slid into his chair and began to copy. The man pulled another chair to the table beside him, reached for a pad of scratch paper, and began to write, muttering.

With the order headed up to both operators, the dispatcher paused to recheck his new dispositions. Eddie glanced at the man beside him. He'd never seen the guy before. Then his sleepy eyes fell on the message the stranger was writing. They widened and stared. The message was addressed to the chief dispatcher. It read:

"Discharge night operator at Clifton immediately. Send carpenter to repair station windows and Williams to investigate."

Fascinated, Eddie watched the looping pen as the arrogant signa-

ture flowed in black ink across the bottom of the sheet. Ominously it spelled out, "R. N, Stuben, Supt."

Superintendent Stuben, in person, mistaking Eddie for the regular night operator, had just fired him. Drowsily, the boomer considered the situation with ironic interest.

There are men still in service on the West Coast Lines who would have given two weeks' pay at the time to have witnessed the proceedings at Clifton that dark early morning long ago. The story still lives in terminal locker rooms, in switch shanties, on the spot, wherever old-timers meet.

Eddie asked: "Are you sure you're Mr. Stuben, superintendent of the Valley Division?"

The official turned a black look on the boomer. "You bet I am, and you will be damn well aware of it in the morning!" He snorted and tucked the message in his wallet to be sent from the next station. "And if the chief isn't more careful in hiring operators I'm going to clean house in the dispatcher's office."

"Oh," said Eddie, and nodded.

"Say!" Stuben stormed suddenly. "What have you got your key open for? Why are you holding these trains?"

"You'd be surprised."

Eddie sighed pleasantly. He was checking every detail in his aroused mind, to be sure he had it right. A condition like this wasn't dropped in your lap more than once in a lifetime. You had to treat it with respect.

As the items threaded through Eddie's brain he felt like howling with unholy joy. The gods of high iron had relented at last. For a brief time they had placed Superintendent Stuben in his power.

Stuben's chair rasped as he stood up. He snapped his words like a commander in battle. "I'll not stand any nonsense, young man. Tell me what is delaying these trains."

"Right now," said Eddie, "I am."

THE REAL CONDUCTOR of the first section was now standing uneasily in the office doorway. The second section's whistle answered the flagman at the tower end of the yard.

Stuben glared and thrust out an angry finger. "You had better answer me damn quick or I'll throw you out of this office!"

"No, you won't," Eddie said. "I'll break you in two if you try it."

"Then start these trains moving right now, or get out!"

"I'll go," Eddie decided. "Wait till I put my other shoe on."

"You'll walk out of town if you do this," the super snarled, "or else pay your fare!" He wheeled on the conductor. "Tell your engineer to whistle the agent out of bed, and make it fast."

The conductor looked at Eddie hopefully. Sometimes these boomers were dynamite. He had a slight

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feeling that this was going to be too hot for the super to handle.

Eddie laced his shoe and stood up. He smiled sweetly as he made for the door.

"You can't call the agent. He's ninety miles from here. And the regular night operator got run out of town by the law!"

He paused at the door and looked at Stuben benignly. "I'm the only one here who can telegraph enough to get your circus moving—unless you can, Mr. Gumshoe. But I'm not doing it. I've worked two days and two nights without rest. So far as I'm concerned, your circus is tied up in Clifton from now on."

Stuben opened and closed his mouth like a fish. The blinding realization of his plight hit him all at once. He remembered now that he had granted the agent leave without sending a relief man, and there had been a telegram from an operator here, which he had ignored, asking for help because the night man was sick. He knew suddenly that this cool young boomer had him trapped by his own high-handed methods.

The conductor started to laugh, but glanced at the super's face and changed his mind. Eddie grinned and strolled out of the office into the cool dark.

The crisp air braced him. The low stars twinkled their applause. Stuben's anguished roar as he charged out of the station made a satisfying sound. This might show the super that men weren't machines, to be worked ceaselessly till they were worn out and then scrapped.

But a vague unease stirred in Eddie's tired soul. An anxious incredulity bothered him. The setup was too perfect. Circumstances had meshed together one after another too exactly right. The gods of high iron weren't ever so amiable without demanding their full pay in return. Eddie quickened his walk to get away from any possible recoil.

FEET pounded on the wooden sidewalk behind him. Stuben bellowed and choked on his breath and ran. Under a lone, pale, street light he caught up with the boomer and barred his way.

"I could have sent you to jail for this," he panted. "Now let's not waste any more time. This circus will be late for the afternoon performance if we don't get it moving immediately."

Men were coming up the sidewalk: trainmen from the two sections, and some circus people who had abandoned a poker game to witness something that promised more excitement.

Eddie shook his head. "No, mister," he said. "There she sets. You don't mind making it tough for the men under you. This time it's your twin."

"You can't get away with this!" Stuben raged.

A grinning circle began to form around them. The trainmen were enjoying this, as Stuben well knew. The whole division would learn about it tomorrow, and the entire system would have the news by next day.

"You are through railroading for the rest of your life if you don't get back to your duties." The super's imagination leaped wildly. "Why, you will have the division tied up if you don't go back at once."

"Sure," Eddie agreed. "That's the way I see it. But just now, because I made a few remarks not knowing who you were, you fired me without even trying to find out if there was cause to do it."

The circle of spectators continued to grow. Both conductors were there and two brakemen. An engineer cautiously hung on the outskirts beyond the shine of the street lamp, chuckling and rubbing his hands. Circus roustabouts crowded and jeered.

Then someone in authority with the big top pushed headlong through the little group and speared the super with a belligerent eye. Evidently he was used to bossing men from a distance. His voice plunged the length of the dark stree

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RAILROAD MODEL CRAFTSMAN

DEPT. SR THE PENN BUILDING RAMSEY, NEW JERSEY

in a reverberating roar, "Who's holding up this show?"

The citizens of Clifton were aware of his burning curiosity. Windows began to show lights.

"It's this—this insubordinate telegraph operator!" Stuben raved.

"Well, he's your man, ain't he?" the circus boss said. "Get him on the job! You ought to see the gents I gotta handle, and the way I do it. Get moving! This'll cost your railroad plenty if we don't show today."

"You are still under my authority," Stuben yelled at Eddie. "Your dismissal isn't effective till you're relieved. You are holding up interstate traffic and violating the law. I demand you go back to work."

"Oh, shut up!"

Eddie was very tired. He sat on the edge of the sidewalk. His eyelids drooped heavily. He was all through. He wished they'd go away and let him curl up in the grass and sleep. That now was his only remaining interest or desire. He didn't care whether traffic moved or stood still forever, whether people saw circuses or rode on trains. He wanted to get the clatter of the telegraph instruments and the rumble of rolling wheels out of his head.

STUBEN was bellowing again, but his words drummed only faintly on Eddie's dwindling consciousness. The circus foreman was using lurid terms. Eddie listened respectfully to these masterful phrases, nodding sleepy approval to the more vigorous denunciations.

The battle of words ebbed in gusty squawls about the dropping head. He drifted and sank and lost all notion of what they were talking about. Someone was bending over him, peering into his face. Damned inquisitive!

He stirred and tried irritably to brush the person off like a fly. He wondered if he could make it to his room. If he ever got a soft surface under him again, he'd sleep right on till the first snow fell. And then:

"Eddie!"

The shriek whirled in from some dim outer space and swept over him like cold water. It checked his delicious descent into the warm oblivion of slumber. It snatched him back and stood him shivering on his feet.

In the first sizzling flash of aroused consciousness he knew that unearned retribution had overtaken him. His misgivings had really been a warning. The gods of high iron hadn't fully relented after all. The figure beside him had the familiar contours of sombrero and blue jeans, copper-studded and stretched tight across wide hips. Burnished hair swept back from the brow.

"Eddie!" the voice exulted.

He reeled under the impact. Strong female arms encircled his neck and tightened in a grip that made his head spin. Stars wheeled down with derisive winks.

"Oh, Eddie, darling! I was so scared that I'd never find you again!"

His alarmed sense revealed that Kate Streeter had her robust hold upon him.

"You was right about how swell it is to roam about," she said. "I tried it soon's you'd gone, and it's grand. Is that why you left me, dear, 'cause you didn't want to stay put on the ranch? I don't blame you, Eddie, and I will go with you now—any place."

Slowly, a little at a time, the telegraph operator untangled himself from the resolute arms, like working his way out a gnarl of cordage. At length he spoke.

"Hello, Kate! How did you get here?"

"I joined the circus," she explained. "Top-hand trick rider and roper. I'm billed all over the country. Remember, you said I'd go good in a show? I hoped you'd see my posters and look me up."

The gods were unrelenting. He'd bragged, back there under the Texas moon, the things he'd seen and done on the careless road, and the gods resent boasting. They lift you to dizzy heights, but when you babble as if you'd done it all by yourself they toss you down.

"Look, Kate," he said desperately. "You hop on your pony and ride away. Me, I'm very, very sleepy."

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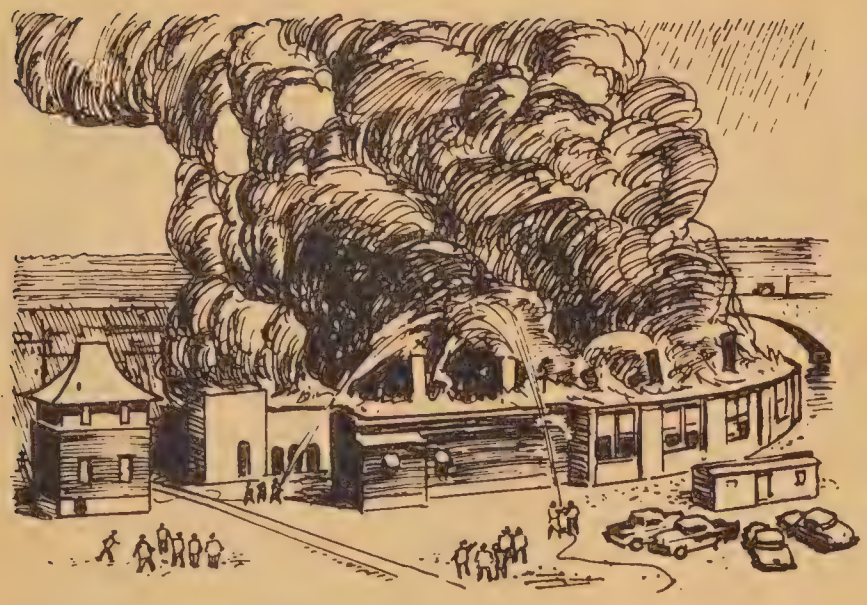
NELS IRWIN, Coast Industries, Dept. D-1
LOS ANGELES 61, CALIFORNIA

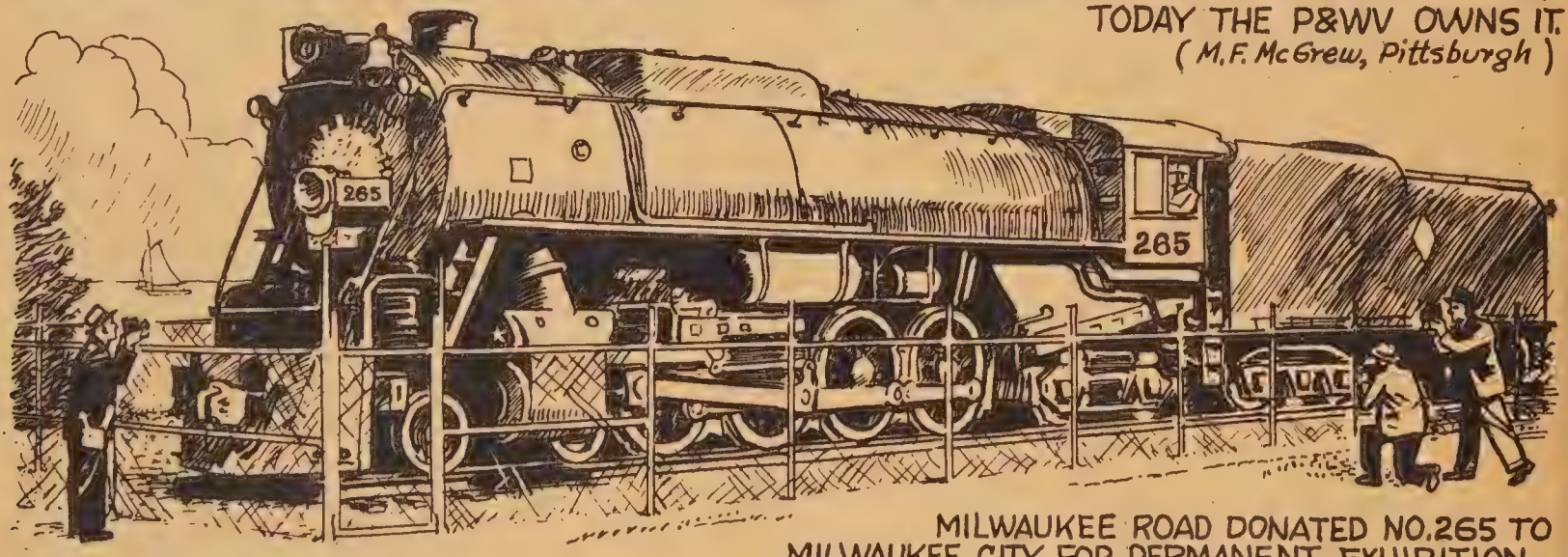
Along the Iron Pike

by Joe Easley



A DIESEL LOCOMOTIVE'S BACKFIRE, IGNITING OIL-SOAKED ROOF BEAMS, DESTROYED THE NEW HAVEN ENGINE-HOUSE AT SPRINGFIELD, MASS.

MYSTERIOUS 3,334-FOOT TUNNEL, UNUSED SINCE 1947 AND SEALED AT BOTH ENDS, WAS BORED THROUGH MT. WASHINGTON NEAR PITTSBURGH, PA., BY GEORGE GOULD FOR WABASH RR. TODAY THE P&WV OWNS IT.
(M.F. McGrew, Pittsburgh)



MILWAUKEE ROAD DONATED NO.265 TO MILWAUKEE CITY FOR PERMANENT EXHIBITION. A FENCE, FLOODLIGHTING, AND A MAINTENANCE FUND PROTECT HER. CAB CONTAINS REALISTIC DUMMIES OF CREW.

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CLEARANCE PROBLEM, AFRICAN-BORN GIRAFFES RIDE THE GREAT NORTHERN FROM ST. PAUL TO SEATTLE.

"But I'm goin' with you," she cried.

A predatory look stared at him. It had sharp hooks. Other than fleeing steers, nothing had likely ever before tried to escape Kate. She couldn't quite realize that this time she'd have to do more than exert her will to have her way.

Eddie sighed and turned to recheck the situation. You declared positively you wouldn't do a certain thing, and right after that you were made to do it. The gods had put Stuben in his hands and then snatched him away.

The circus boss had his jaw thrust into the super's face. He was naming some cold, hard conditions that had Stuben baffled. Eddie strode to them quickly. He took each by an arm and thrust them firmly through the grinning circle to the privacy of outer darkness.

"Now listen close," he invited. "You both want that circus moved, don't you? All right. Here's the way it's done—and there isn't any other method. Don't argue with me, because right now I can't stand it. That woman there who hung herself on my neck. Know who I mean?" he demanded of the foreman.

"Yeah. Sure. Kate Streeter. Everybody knew her the first hour she joined us."

"Right!" said Eddie. "This is a critical case and there is only one answer to it. If," he explained, "you will guarantee to have her aboard your train when it leaves here, and if you will undertake to see that she doesn't escape captivity before this evening, I'll get your train moving right now."

The circus man smirked. "Friend," he said, "I guess that'd be worth it. It'll take about six of my roustabouts to handle the job and they'll be subject to some damage while they're doin' it. But I'll see it's done if you'll get us out of town."

TWO days later, Eddie, refreshed by a twenty-four-hour sleep and with free transportation from Clifton, came cheerfully into the chief dispatcher's office for his check. The glum old chief studied him a few seconds. Then he arose and extended a hand.

"I guess everybody on this division owes you something," he said. "The word's out. Stuben is through, and it was his set-to with you that had the most to do with it. If you stick around till he's gone I'll give you a job you'll like. It won't be long now."

The gods of high iron were being ironical again, but Eddie grinned.

"Mister," he said, "there's a circus that's billed to show hereabouts for the rest of the season. Right now, my main purpose in life is to keep as much of the United States between me and that outfit as I can manage without paying fare. I'm headed East." ●

Abandoned Bridge

OLD BRIDGE, across blue Truckee's babbling stream,
Thy honored role in history is done,
No longer lit by headlight's dancing gleam,
For o'er thy beams the final train has run.
Across thy floor was built an iron road
To link thee with Nevada's great renown
And silvered vault, the treasured Comstock Lode,
Now spilling warped, with crosscut crumbling down.
No longer blends the sound of tinkling bell
With muffled stack and engine's clanking rods.
The march of Time has tolled thy fateful knell
To rot and rust, forsaken by the gods.
Old V. & T., whose glam'rous winding rails
From Reno to Gold Hill's treasured ridge
Once 'live with trains along the silvered trails,
There naught remains but paths and lonely bridge.

—H. L. Kelso

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"My first story sold to *Modern Romances* for $240, thanks to Palmer Institute. Being professional writers, your instructors understand a beginner's problems. Their written comments are balm to the wound of being an unpublished writer. Then, presto! a story sells, and the wound is no more."—*Harriet F. Wenderoth, Atlantic City, N. J.*

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"Sold an article on hunting to *Outdoor Life* for $400—that makes $1400 from them, plus two stories to *The Trapper*, and several to other men's magazines. The time I put on your course was the most valuable I ever spent."—*Ray Beck, Knox, Pa.*

Student Sells Six Stories

"For several years I'd been writing rather haphazardly and gotten only printed, mechanical rejection slips. I started taking the Palmer course about a half year ago, and during recent months, have sold six stories to leading science fiction magazines. That doesn't make me rich or famous, but it does make me happy. Now editors sometimes even recommend me to friend-editors in other markets. Here's to Palmer and bigger and better sales."—*Chas E. Fritch, Utica, New York.*

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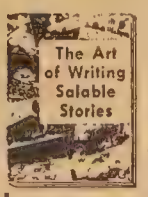

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1957 Screen Gems, Inc.

Casey Jones Series on TV

A SERIES of movie melodramas under the general title of "Casey Jones," filmed on the Sierra Railroad in California by Screen Gems Inc., is now being shown on television. Any resemblance between these movies and the real John Luther Jones is purely coincidental. (Upper photo) An outrigger platform permitted camera men to take close-ups of wheels and cab while the *Cannonball Express* was rolling. (Left) Dirty work at the crossroads. Two members of the cast, Alan Hale and Tom McKee, seek a killer in the episode known as "Death Rides the Tender."

MAIL CAR

(Continued from page 10)

doing what I could for the victims, until four o'clock next morning. Although both engines were reduced to scrap, scattering their fires over the wreckage, and although the coaches were wooden, heated by coal stoves, the wreckage did not catch fire." ●

INFORMATION and pictures on the Santa Fe's McKeen motor cars are wanted by A. P. Murphey, 4 S. Washington St., Iola, Kan., who was a Santa Fe shopman many years ago and did much service work on two of those cars.

"At first the McKeen Car had only one huge marine-type engine of six cylinders," writes William Schopp, 445 S. Logan Ave., Trenton, N. J. "Later, perhaps in 1917 or '18, McKeen built a twin-engine car, as I stated in an article in your Jan. '51 issue. Can some reader tell me the car's number? Does anyone have a picture of that car, which apparently was the company's last gasp?

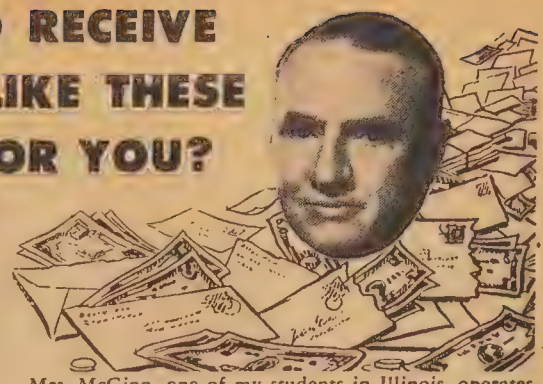
"No McKeen car is left in service, so far as I know, except that the body of the 'mallet' type built for the Southern is now being used by Utah Railway at Helper, Utah. The M-23, shown in my photo in Oct. '57 issue, is now used as a chicken coop on a Nebraska farm." ●

CAMELBACK No. 768, built by Rogers and shown in our October issue, was one of ten engines rebuilt at the Union Pacific's Omaha shops in 1891-'92, renumbered 831 through 840, according to Frank C. Harmer, UP machinist for 44 years, 4708 N. 38th St., Omaha, Neb.

"H. L. Kelso's article on double-cabbers would have been even more interesting if it had also pictured a locomotive with only one pair of driving wheels," writes Burr Murdick, 513 Horatio Ave., Charlotte, Mich. "In 1896 Baldwin built two such engines, Nos. 385 and 386, for the old Philadelphia & Reading, designed by L. B. Paxon, the road's superintendent of motive power, both 4-2-2's with 84½-inch drivers. They attained a speed of 87.5 miles per hour in fast passenger service competing with the Pennsy between Philadelphia and Jersey City." ●

DEATH came to a great American railroad artist, A. Sheldon Pennoyer of New York, age 69, in an automobile

WOULD YOU LIKE TO RECEIVE STACKS OF LETTERS LIKE THESE EACH WITH MONEY FOR YOU?



I have found a proven formula for quick success in making money. Others I've shared it with also have been successful. Would you like to know about it?

It's simpler than you might think — just buying good imports at next-to-nothing foreign prices and selling them in the U.S. by mail order or at wholesale to stores.

To most people, importing smacks of mystery, romance — and "costly" things for collectors. Actually, any capable and ambitious man or woman should learn import-export quickly. And, there are thousands of beautifully made imports obtainable at trifling cost abroad to sell in the U.S. by mail order. There are also great opportunities in exporting U.S. products.

Native villages in Africa, romantic Vienna, bustling Copenhagen, mysterious Hong Kong — yes, countryside hamlets and great cities all over the world produce fascinating products.

Using my plan, you don't have to travel abroad unless you want to. You don't even have to know a foreign language. And, there is no face-to-face selling in mail order.

I have proven this plan with 103 imports — and the opportunities for the sale by mail of thousands more are breathtaking in their possibilities. Hunting knives and binoculars from Germany, silverware from Sheffield, England — hand-carved art objects from Africa — all costing less than $1 abroad have values up to $5 or more here and are big sellers by mail order.

Monthly bulletins sent free to those who follow my plan show suppliers of new and desirable imports.

As I write this, I am receiving as many as 1,000 cash orders a day for imported clocks — all by mail order. They cost me only 63¢ and I sell them far below the U.S. market — a terrific bargain and a wonderful seller. And, I don't stock them as they are shipped direct to the buyers from abroad, *after I receive the cash.*

So you see, it is even possible to conduct a business of this kind without investing in merchandise.

Mrs. McGinn, one of my students in Illinois, operates a gift shop and sells Arabian perfume by mail order. F. Basler, N. J., sells Aztec bird feather pictures from Mexico to stores and by mail order.

You might ask, "Why do you let others in on your plan? Why don't you keep it all for yourself?" The answer is that items for import are countless. No one person could possibly handle even a small proportion of them. There's plenty of business in import-export for you and me and many others.

If you are sincere and really open-minded to a new and different opportunity — one which may change your whole idea of the kind of money you can make in your own full or part time business — write today for full details. Air mail reaches me overnight.

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Canadian Pacific Railway

Canadian Pacific's speedy No. 3000, a Jubilee Class 4-4-4, made a brilliant record in the brake test described below.

accident near Madrid, Spain. So distinguished was Mr. Pennoyer that the *New York Times* gave nearly a full column to his obituary. Famed also for his portraits and landscapes, he had a special fondness for painting narrow-gage lines, oldtime engines, and rail-faring scenes, some of which adorned *Railroad Magazine* covers. His last railroad commission was to do a "Big Boy" painting for Union Pacific.

Mr. Pennoyer wrote and illustrated a book, *Locomotives in Our Lives* (Hastings House), and was a founder of the Railroadians of America, an independent fan group that broke away from the old Railway & Locomotive Historical Society about 20 years ago. An exhibition of his paintings drew this comment from the *New York Post*:

"If you ever lived in a cold countryside where a locomotive used honest-to-goodness steam and came curving across the white fields, a throbbing warm messenger from remote cities, or if you still remember the friendly glow on the snow as the fireman swung back the firebox door of No. 61 as she clattered into the dusk toward Buffalo or Moline or Fargo—you'll warm to the Pennoyer paintings as you would to the smell of harness or the sound of spring peepers.

"For a locomotive—like a fire engine or a brass band and like almost nothing else—has the power to cast a spell and make the most accustomed of us stop whatever we're doing and watch mutely until it has passed and left a sort of loneliness in its wake." ●

OVERSEAS. Returning home to London, England, after enjoying a holiday with his wife, Henry Ware sent his baggage in advance by rail. When it arrived, one of its two labels was missing. A few days later the missing label was delivered to his home—attached to a fire extinguisher belonging to the British Railways!

"Some odd things happen to luggage," comments Joseph Fox, BM, Exn. 3, London, W.C. 1, England. "A resident of Southampton seaport sent his luggage home by rail and waited several weeks for it to show up. Finally it came back on an ocean liner from Bombay!"

British Railways have re-introduced and extended the popular scheme of five-day holiday expresses, designed to keep rolling stock moving on days when it might otherwise be idle. This arrangement caters to people who want to go places and yet return home every night. An inclusive ticket, costing little more than the British equivalent of $10, is good for 1,000 miles of travel and guarantees the holder his own particular seat on the train each day. The trips include two or three to the seaside, one to an inland lake or carnival park, and one to a city of historic interest.

After touring many countries here and abroad as an elephant handler, an acrobat, and a circus clown, 29-year-old Kenneth Simpson has quit the big top to become a porter for the British Railways at Kirkham station, England. Says he, "I have traveled enough and am tired of circus life." It isn't often that a man takes a railroad job because he is fed up with travel.

When the Manchester-London express steamed into Congleton, England, at one a.m. with a huge Coronation-class engine and 14 coaches, the fireman was too ill to carry on. To prevent a long delay the local stationmaster, Edwin Fordham, who was familiar with locomotives as an amateur railfan, volunteered to stroke her into Longport, where a relief fireman could take over. It was a bit irregular but Edwin did surprisingly well.

"I'd never had anything to do with such a large engine before," he says, "but I soon got the hang of it. Despite being knocked up, I enjoyed every minute on the job."

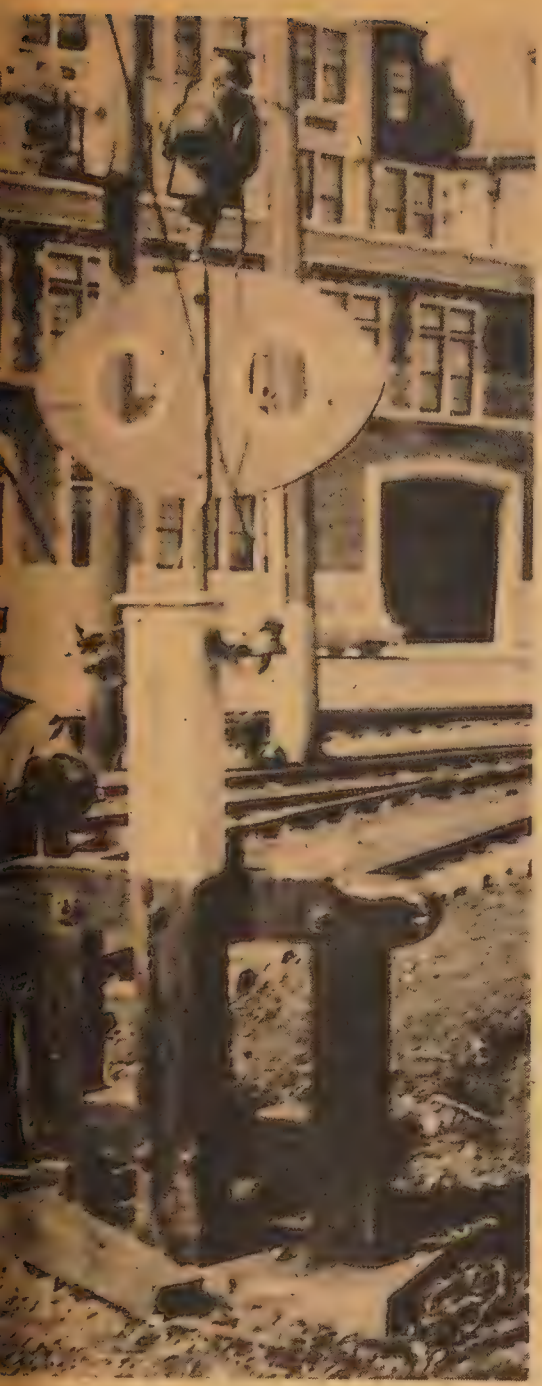
One of the worst rail disasters in history occurred on the island of Jamaica in the West Indies late Sunday night, September first, when a holiday special train carrying 1,500 Roman Catholics home from a pilgrimage and beach outing broke in two on a hill. Two coaches dropped down an embankment, taking 168 persons to death. About 400 others were injured, some fatally. ●

CANADIAN PACIFIC has no record of tests on its Jubilee Class 4-4-4's involving speeds up to 131 miles per hour. This is the company's answer to persistent rumors that, if true, would give them credit for the world's fastest steamers.

However, one of the Jubilee F2's, No. 3000, performed brilliantly in a brake test near St. Telesphore, Que., about 38 miles west of Montreal, on Sept. 18, 1936. Traveling eastward with a fully loaded tender and four cars, she attained a speed of 112.5 mph. and was brought to an emergency stop from that speed in the almost incredible time of 78 seconds!

Distance covered from the application of brakes till the wheels ceased turning was 7,305 feet. The locomotive and tender together weighed 461,500 pounds, weight on the 80-inch drivers 120,000, total weight of train 905,660. A Canadian Pacific motive power official who prefers anonymity says the Jubilee is capable of considerably higher speeds but that 112.5 was ample for the brake test.

The Jubilee F2 was designed as a lightweight semi-streamlined engine. Montreal Locomotive Works built five of them for CPR; two are still in service. They have 17¼ x 28-inch cylinders, 300 pounds boiler pressure, and 26,500 pounds of tractive effort. Montreal also built 20 Jubilee F1's from a different design. With 75-inch drivers they could not match the F2's for speed. ●



Last wooden switch-stand on Canadian National system operates stub track on Montmorency Subdivision, formerly Quebec Railway, Light & Power line at the Quebec terminal of the line.
Stephen D. Maguire collection

Steve Maguire's
TRANSIT TOPICS

NEW ORLEANS trolley service on famed Canal Street, which operates at a profit on a seven-cent fare, seems to be firmly established. A $12,000 study of traffic conditions has just been completed by an engineering firm for the city, the transit company, and the Retail Merchants Bureau. A proposed redesigning of the street would not interfere with trolleys.

Steve Maguire

According to William H. Harris, YMCA, Vicksburg, Miss., the report states: "Consideration should be given to the use of modern PCC-type equipment . . . Such cars would permit increased passenger capacity, reduce the number of required units, and permit increased layover and recovery times."

The engineering firm, Wilbur S. Smith of New Haven, Conn., discarded other traffic plans such as the use of buses on Canal Street, a trolley subway or elevated line, and a monorail. Not even the bus interests can discount the excellent service given by Canal Street trolleys, despite the old cars now used, running on half-minute headway and making a good profit with one of the lowest fare rates anywhere.

Streetcars will run in the city of Washington, D. C., for as long as the laws permit. So said O. Roy Chalk, president, District of Columbia Transit Corp., in a recent TV interview. Mr. Chalk would like to retain the trolleys indefinitely because, he says, "I think they give the best ride from the customer's viewpoint." He hopes that public demand will persuade Congress to kill the law requiring a complete change-over to bus operation by 1963.

That much-publicized air-conditioned trolley, No. 1512, the *Silver Sightseer*, which the company launched last summer as a sort of "trial balloon," made such a hit with the passengers that Mr. Chalk is asking the Public Utilities Commission to let him air-condition nine other cars. In fact, he wants to air-condition 100 of the system's fleet of 500 PCC's on the ground that increased revenue resulting from such a move would probably more than pay the cost.

Looking ahead, he said that unless Congress revokes the pro-bus law he anticipated a big loss to the company in disposing of its present equipment. It is most unfortunate that those who make decisions for or against trolleys are not, as a rule, the people who ride in them. Thanks to William E. Warden, Jr., 1216 Shamrock Lane, Waynesboro,

MEN PAST 40

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Air-conditioned streetcar, the *Silver Sightseer*, No. 1512, at Peace Monument loop, Washington, D. C. Below you see the interior of this most luxurious car.

District of Columbia Transit Corp.

Va., for keeping us posted on the D.C. situation.

INCIDENTALLY(the *Silver Sightseer* is not the world's only air-conditioned streetcar, according to Jim Farrell, 2343 N. Karlow Ave., Chicago, Ill., who adds, "Pittsburgh Railways continues to operate such cars and we hope they run far into the future."

Jim tells us that the controversial Chicago, Aurora & Elgin has received offers from the Republic of Mexico and the City of Rio de Janeiro, Brazil, to buy its 90 passenger cars and four buses. This offer caused a local furore because permission to "suspend" passenger service had been given on the understanding that the line and cars be preserved intact. Jim denies a published report that the last three Kansas City PS lines were abandoned in June. The little Dodson shuttle kept going till the bitter end.

SACRAMENTO NORTHERN car pictured in December issue was the *Alabama,* not the *Alameda* as our caption stated. The error was caught by Paul Overholt, Box 504, W. Hyattsville, Md., and Lou Eben, Box 261, Iola, Kan. For years the *Alabama* was the private car of President Huntington of the Pacific Electric. After he died the SN bought it in 1921.

Says R. C. Terrell, 148 E. Colorado St., Pasadena, Calif.: "The *Alabama* was equipped for use in either an interurban electric or a steam train. SN operated it between Oakland Mole and Chico until fire destroyed it at Dozier on March 22, 1931."

"Mr. Huntington received most of his plans for building the PE from the Rev. Floyd Gurley, missionary to the Indians in Lower California," comments Lou Eben.

"In 1936, when the Southern Pacific controlled 51 percent of PE stock, the minority PE stockholders franticall sent to Mexico for Father Gurley. He actually came and worked under the assumed name of Lathan for three or four years in an effort to straighten out the mess and restore PE to its former glory, but the SP apparently blocked his program. Who can tell me if Father Gurley is still living, and where?"

LONGEST double-tracked trolley trestle on the continent, perhaps anywhere, is on Route 26 of the Baltimore (Md.) Transit Company, 4000 feet at Sparrows Point, according to H. J. Diers.

Chicago Transit Authority destroys its outmoded wooden cars by the hundreds as metal equipment replaces them in nearly all subway and el main-line service.
Chicago Sun Times

Roger Borrup, Warehouse Point, Conn.

Trolleys haven't run here on Main Street in East Hartford, Conn., for 20 years but the track is being rebuilt for a relocated railroad interchange involving the Connecticut Company and two huge plants handling defense contracts.

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O. R. Cummings

Bob Saunders at K-35 control of old Conn. Co. car 1391 rides new half-mile of Seashore Electric Ry. museum track. "Notre Dame" sign on dasher came from Manchester, N. H.

First PCC ever built, ex-NYCTA 1001 from Brooklyn, nov on Branford Electric, stops at small underpass which i used for repairs because there is no pit on the line

From memory's album comes a four-wheeler of the old Newton & Boston Street Railway, which later became part of th Middlesex & Boston line. The motorman-conductor is posing like a guy at a funeral. Note also the cop and the fur co

CALIFORNIANS are speculating on the fate of Key System tracks over the Bay Bridge. Governor Knight signed the bill authorizing a major reconstruction of the bridge, including removal of the electric-line tracks and the use of that space for two automobile lanes. However, this action will be taken only if and when the trans-Bay electric service is abandoned.

Key System has applied to the PUC for permission to tear up the rails and substitute buses, but the state's director of public works says he has no plans to remove the bridge rails precipitately, even if abandonment is allowed.

SMALL railways that passed out after being operated briefly are recalled by Felix E. Reifschneider, Box 323, Frostproof, Fla. For example, in Maryland about 40 years ago the North Beach Railway ran between North and Chesapeake beaches on a two-mile route lined with cottages, sand dunes, pavilions, and casinos. The area was a favorite resort spot for Washingtonians who rode steam trains of the Chesapeake Beach Railroad to and from the shore.

For about two years the juice line operated a few single-trucked open cars. Then, for a short spell, a Fordson tractor with flanged wheels pulled the same cars as trailers. Today the line is a fading memory.

In 1914 the Central of Florida Railway operated a battery-car line at Daytona Beach but quit in 1917, apparently when the first set of batteries gave out. And at Sanford, Fla., the Sanford Traction ran gasoline-driven passenger cars for about two years and, for a while after that, more enduring freight service.

Another line in the long ago was the Edmonton Interurban, up in Canada, which must have set a record by operating one gas-electric passenger car with gasoline fuel and another with kerosene. The service began in 1913 but ended two years later after a barn fire had destroyed a passenger car. It ran through Calder to St. Albert. After abandonment, the kerosene-powered car was sold to the Lacombe & Northwestern, a line that the Canadian Pacific took over about 1930.

TOURISTS visiting Washington, D. C., on a recent holiday found the "S.O.B." line jammed all day, with one of its two cars out of service and awaiting new wheels. The line, in case you don't know, is the Capitol and Senate Office Building monorail electric subway that has been carrying passengers between the two buildings for 45 years. This line is unique.

It is the world's shortest underground common carrier, being only 750 feet long and transporting some 2000 persons a day with a top speed of 12 miles per hour on a run taking 45 seconds.

With the construction of a new office building, a conveyor system may soon be installed, reports H. H. Diers, 4722 Chesapeake St., N.W., Washington. This would be an endless series of small cars riding on rollers and conveyor belts. They could operate at speeds up to 22 mph. New tunnels would be built and the improved line would have two branches, one going to the old Senate Office Building, the other to the new one.

OBJECTION to our printing news and pictures of foreign lines comes from Ralph A. Marson, 13335 Promenade, Detroit, Mich. "Even though North American electric transit is dwindling," he writes, "I resent your policy of emphasizing overseas material. As an ex-GI who served in the post-war occupation of Japan I just can't get interested in foreign railways."

Other fans, please comment.

THE MUSEUM of Seashore Electric Railway employed the piggyback method in ballasting its new mile of track on Route 4 near Kennebunkport, Maine, reports O. R. Cummings, historian of juice lines, 300 N. Bay St., Manchester, N. H.

They used No. 100, a steeple-cab locomotive built by Laconia in 1906 for the old Atlantic Shore Line Railway, coupled to a double-truck flatcar (formerly a Connecticut Co. crane). Dump trucks were driven onto the flatcar via a specially-built ramp. Then the train proceeded to the point where gravel was needed. There the railroad builders raised the dump body and, as the train eased slowly ahead, the gravel cascaded onto the track. After that, shovel crews took but a few minutes to spread the gravel for tamping.

This was a lot easier than loading gravel onto a handcar, pushing the car up the line, and then shoveling off the ballast. No. 100 helped also in completing the job, her air tank being tapped to provide pressure for Seashore's pneumatic tamping machine. The line was built with second-hand rail and poles but new ties and overhead fittings. About half of it has direct suspension

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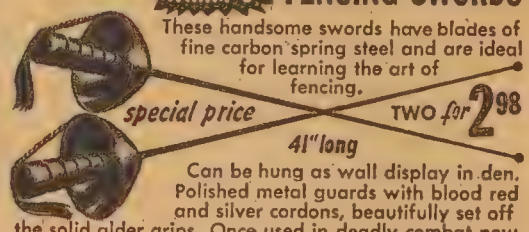

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Top photos by John Stern from fourth edition of "Down Memory Lane."

Happy days on the Branford Electric line. Ex-Brooklyn trolley 4573 is mirrored in the placid East Haven River. Fred Bennett reletters newly-overhauled 15-bench open car 1414. (Below) E. J. Quinby lays cornerstone for Sprague Memorial Library.

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Flagship of fleet of 22 PCC's that cross border between El Paso, Texas, and Juarez, Mexico. The others are painted yellow with white tops, not decorated.

overhead, the rest being of catenary construction.

Visitors from nearly all of the 48 states and from Canada rode the Seashore last summer and flocked to the original museum site, now known as Arundel Shops, to see more than 50 cars on display. The double-decker from Blackpool, England, drew the lion's share of attention. Other attractions included three cars from the Montreal & Southern Counties, a Chicago red Pullman, and an IRT subway car from New York.

Volunteer crews took turns at running old 1391, ex-Connecticut Co. 15-bench car, to and from the Seashore's new Junction terminal. The line is located near the Boston & Maine right-of-way and train crews often whistled a salute to the 1391.

As a major tourist attraction, the Seashore museum gets many columns of newspapers publicity. Recently it loaded another of its ex-Connecticut Co. open cars, No. 838, onto its flat trailer and hauled it to Portland for the city's annual Millionth Visitor parade. The trailer, bright with red livery, caught many eyes as it headed up Congress Street in the procession.

THE 100TH anniversary of the birth of Frank Julian Sprague, "Father of Electric Traction," was the occasion for laying the cornerstone for a new building at the Branford Electric Railway site in East Haven, Conn., the Sprague Memorial Library Museum.

Directing the ceremony was our good friend, E. Jay Quinby, founder and president of the Electric Railroaders Association. Among the hundreds of spectators were members of the Sprague family and city officials.

The building now under construction will honor the genius who invented or perfected many devices that made possible the trolley lines of later years as well as the electric subways, els, and rapid-transit surface lines. Upon completion it will house and display a large collection of papers, books, and other memorabilia of the electric railway era. It is located beside the track now used by BERA trolleys.

BERA has just issued an interesting and well-illustrated 32-page book covering the museum and its trolley cars—namely, the fourth edition of *Ride Down Memory Lane*. Designed especially for visitors to the museum, it should appeal to all trolley fans. Avail-

Stephen D. Maguire

Remember the breezy old Atlantic City & Shore line? This car was No. 6825.

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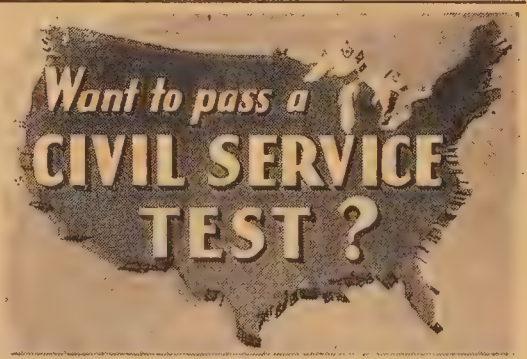

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Next Issue – April (out Feb. 4)

CANADIAN NATIONAL EXPANDS—Charles Morrow Wilson tells how a great system is branching out further into the wilderness

DOUBLE-ENDERS, by H. L. Kelso, popular authority on locomotive types

NICKEL PLATE POWER—current steam-diesel roster

RAILROAD OPERATION BY RADIO, by Peter Josserand

IN SEARCH OF THE SUN—Harry Bedwell fiction at its best

Plus plenty of good photos, your favorite departments, short hauls, and a color-photo cover. (Coming in near future, Burlington roster)

able at $1 per copy from BERA, Short Beach, Conn.

SIXTY former St. Louis Public Service Co. PCC's, 1700 series, are now in service on the five lines of San Francisco Municipal Railway, renumbered in 1100 series, report J. Bromley and William Volkmer. They replace the old 150-213 series, giving San Francisco an all-streamlined streetcar system—except for the cable lines.

Additional PCC movements include 10 cars for Tampico, Mexico, for their long suburban line to supplement old wooden cars still in use. These were purchased from the recently-abandoned Kansas City PS. We prematurely reported this sale a year ago, but now it's definite.

CHICAGO'S only remaining streetcar route, Clark-Wentworth, was divided into two parts September 8th, reports Alex. L. H. Darragh, 1314 Bedford Rd., Grosse Pointe Park, Mich. Seventy-one buses replaced 39 trolleys between the old north terminal at Howard and a new south terminal at Harrison just south of the Loop. The north route is now designated "Clark." The south part of the former Clark-Wentworth route, now known as "Wentworth," is served by 48 streetcars every Monday through Friday.

NEW PUBLICATIONS. The Fort Collins (Colo.) Division of the old Denver & Interurban Railroad was featured in the June '57 issue of *Pacific Railway Journal*. A 16-page illustrated story takes the lines from their birth in 1907 to the end in 1951. Those lines, originally part of the D&I, were bought by the city in 1919 and thereafter were operated as a Birney-car system. Co-authored by Ernest S. Peyton and R. A. Moorman, copies of the brochure are available from Donald Duke, 2304 Melville Dr., San Marino, Calif., at one dollar each.

The San Diego Railway Historical Society featured the San Diego & South Eastern in its July '57 issue of the *Dispatcher*, a ten-page history of a seldom-heard-of interurban line. Several interesting photos are included in the story written by Eric Sanders and Richard V. Dodge. Underpriced at 25 cents postpaid, copies are available from Eric Saunders, 7861 Normal Ave., La Mesa, Calif.

EVEN if you can't read French but enjoy good pictures of foreign juice lines you will like the new 250-page book, *Les Tramways Francais*, by J. Arrivetz. Concisely arranged and bound in hard cardboard, it covers the entire history of French tramways, with photos, maps, and statistics.

In 1925 France had 6,400 miles of tramways. Today only 180 remain. Though the nationalized SNCF electric main lines all over France are still expanding, the local traction routes are disappearing. *Les Tramways Francais* is available from Editions Omni-Presse, 47 Rue Marietton, Lyon, France, at 5000 francs, payable by international money order obtainable at any post office.

ROSTER OF CLEVELAND TRANSIT SYSTEM

				Length	Width	Height	Horsepower		Weight	Seats	Stands
101-112	Single-unit car	St. Louis	1954	48'-6"	10'-4"	11'-9"	220		56,000	52	65
201-256	Double-unit car	St. Louis	1954	48'-6"	10'-4"	11'-9"	220	MG car	53,300	54	65
								Comp. car	53,800		
0516,0518	Dump cars	Differential	1927	40'-5"				Former streetcar work equipment			
0611,0615	Rail flatcars	Differential	1928	38'-1½"				Former streetcar work equipment			
0711	Crane car	Differential	1925	43'-0"				Former streetcar work equipment			

NOTES: All of the above cars have arch monitor roof with ventilation louvers, AXIFLO fans, multiple-unit door control, SMEE-type brakes, syniston controler 4 55 hp motors, PCC trucks. Single-unit cars have control equipment at each end. Double-unit cars, composed of one compressor car and one MG (motor generator) car have control equipment at each end of unit (one control station per car). Power is collected from catenary by small pantographs. Voltage is nominally 600 Volts DC.

THE TWO newest rapid transit systems on the continent are those in Cleveland and Toronto. The Toronto Transit Commission's line opened March 30, 1954, and extends about four miles from Union Station in downtown Toronto to Eglinton, with 12 stations. Construction is mainly in a cut-and-cover subway with a portion in an open cut.

Cleveland Transit System's rapid-transit line is about 13 miles long and has 12 stations. Opened in 1955, it is almost entirely on private right-of-way, with railroad-type roadbed and only a short stretch of subway at Union Terminal Public Square.

Just as the physical plants of CTS and TTC contrast, so does their equipment. TTC cars are heavyweight and conventional. They have incandesant lights. Their brake equipment has electric application and release, with superimposed automatic air brakes. These cars have a deep red exterior with a gold stripe and heavyweight trucks. Their operation is unusually smooth and noiseless but seems sluggish.

On the other hand, CTS uses lightweight cars based on the PCC rapid transit design used in Boston. They have SMEE brake control and extended range dynamic brakes and use their clasp-type air-brakes only to complete a stop and hold a train at a station. They feature fluorescent lighting, blue and white exteriors, PCC trucks, and agile operation.

Sy Reich compiled both rosters.

Sy Reich

Toronto citizens may well be proud of their subway's modern steel equipment.

ROSTER OF TORONTO TRANSIT COMMISSION

Road No.	Class	Description	Builder	Date	Weight
5000-5029	G.1	Two-unit steel car	Gloucester Railway Carriage & Wagon	1953	Even car — MG — 85,580 # odd car — comp. — 85,470 #
5030-5099	G.1	Two-unit steel car	"	1953	Even car — MG — 83,500 # odd car — comp. — 83,390 #
5100-5105	G.2	Two-unit aluminum car	"	1953	Even car — MG — 73,500 # odd car — comp. — 73,390 #
5200-5227	G.3	Steel blind motor car	"	1956	76,700 #
5110-5115	G.4	Two-unit steel car	"	1957	

NOTES: All of the above cars have these dimensions: Length over body 55'-7½"; width 10'-3⅜"; height 11'-11½"; seats 62; stands 164. Classes G.1, G.2, and G.3 have 4 Crompton Parkinson C-95 68-hp motors, electric application and release, with superimposed automatic air-brake equipment. Class G.4 have 4 Crompton Parkinson C-12-A1 70-hp motors with electric application and release, superimposed automatic air-brakes, and dynamic brakes. Power is collected from covered third rail by subway third rail shoes. Voltage is nominally 600 Volts DC.

Road No.	Type	Builder	Date	Length	Width	Height	Weight	Ex
RT-1	DT rail maintenance car (2 pillar jib cranes)	Toronto Ry.	1918	42'-11"	8'-1"	11'-7"	54,000	Snowplow TP-2
RT-2	DT flatcar (1 pillar jib crane)	Niles Car Co.	1927	43'-4"	8'-4"	10'-11¼"	50,060	Originally passenger car, then supply car RS-3
RT-3	DT ballast car (3 dump sections)	Differential	1922	40'-6"	8'-0"	10'-7"	55,000	W-18
RT-4	DT platform maintenance car	CCF	1921	58'-10"	8'-4"	11'-2⅛"	46,500	Peter Witt 2528
RT-5	ST rail grinder	Preston	1916	35'-4½"	8'-4½"	11'-0"	30,900	Originally passenger car, then snow-scraper 2206
RT-6	DT snow blower (rotary snowplow)	Differential	1922	43'-7"	8'-0"	10'-11¾"	65,900	W-850

NOTES: All of the above work cars originally trolley equipment converted by TTC in 1953 to double end rapid transit equipment. Double Truck (DT) cars have Brill 77E1 trucks, 31" diameter wheels, 4 GE 241B 50 hp motors, K-35 controllers, M36 brake valves controlling straight air systems. Single truck car has Brill 22E1 truck and same motors, controler, and brake valve. ●

Sy Reich, 92 St. Marks Pl., New York City

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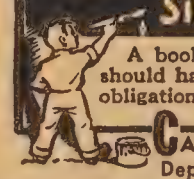

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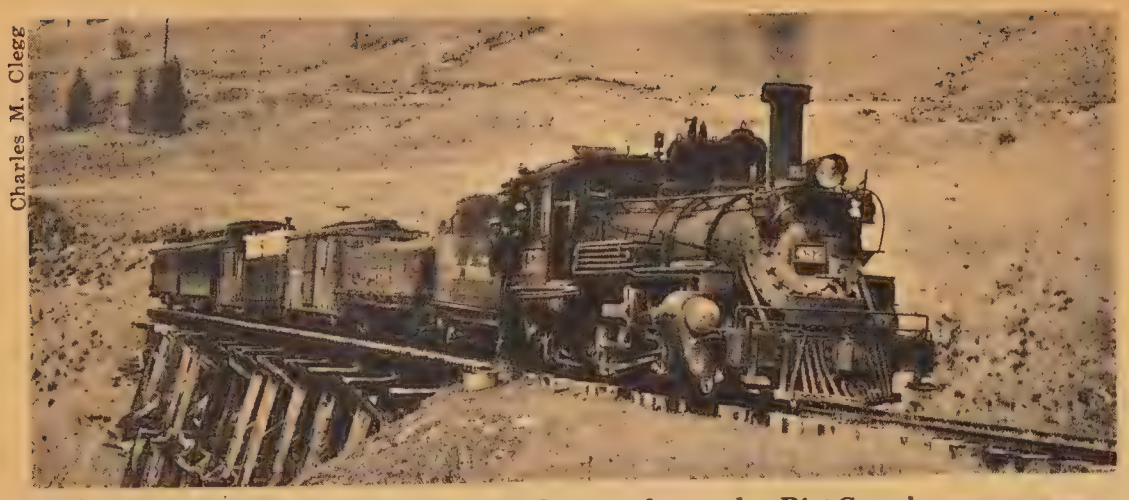


Charles M. Clegg

A long-gone mixed train crossing wooden trestle on the Rio Grande narrow-gage.

BOOKS of the RAILS

by P. C. GRAVES

THE AGE OF STEAM, by Lucius Beebe and Charles Clegg, Rhinehart & Co., 232 Madison Ave., New York City. 303 pages, $15.

Seldom does a book become a best seller before publication, particularly one in the luxury class. However, it is not surprising that this magnificent volume has that rare distinction, with more than 11,000 books ordered in advance, and the limited "Mainline Edition" (350) so oversubscribed that copies are reported to be selling at $40 each in New York.

In *The Age of Steam*, Messrs. Beebe and Clegg have created a pictorial anthology in the grand manner. It embraces a century and a quarter of steam trains from the early woodburners to the ultimate in great behemoths that pulled the high varnish. As this nostalgic pageant unfolds before the reader's eyes he is aware that "somewhere deep buried in the consciousness of every American there lies the image of a steam locomotive." No other mode of transportation is more American than the iron horse, and the authors have brought it to life in a matchless collection of pictures skillfully integrated into text that is pure poetry.

You'll never regret the fifteen dollar investment, providing you're lucky enough to get your hands on a copy.

THE CALIFORNIA WESTERN RAILROAD, by Stanley Borden, The Western Railroader, P. O. Box 668, San Mateo, Calif., 40 pages, $1.

An interesting but routine story of a small railroad that has served the logging industry for 75 years, hauling lumber from Willits, in the heart of the redwood country, over a tortuous forty miles to the coastal town of Fort Bragg where cargo is loaded on ships of the National SS. Co. This is a scenic road of compound and double bowknot curves cut through towering mountains and deep canyons. History of the CW is typical of many short lines that depended on the expansion and decline of a particular industry. Steam power has long since been replaced by diesel-electrics for freight, and skunks (motor cars) for passengers.

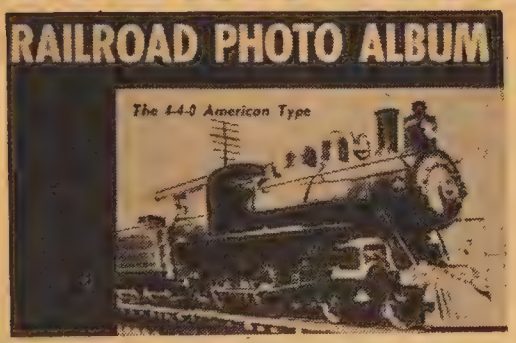
PENINSULA SERVICE (The Story of the Southern Pacific Commuter Trains) by Fred A. Stindt. The Western Railroader, P. O. Box 668, San Mateo, Calif., 40 pages, $1.

The history of another short line which has succumbed to the diesel age.

For nearly a hundred years this branch of the Espee played an important role in the evolution of steam power and the development of the area between San Francisco and San Jose. The 47 miles of track, designed for commuters, has carried special trains for the sporting crowd, football and race-track fans.

On Jan. 22, 1957, the last Espee *Daylight* steam locomotive made the run. Today, more than 16,000 commuters ride behind diesel locomotives in air conditioned, double-deck cars.

STEAM LOCO PHOTOS



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Illinois Central Motive Power

Compiled by Sy Reich

STEAM NOTES: Roster accurate as of January 1, 1957. Information courtesy of Illinois Central Railroad. TE—tractive effort in pounds; EW—engine weight in pounds; BP—boiler pressure in pounds; Cyls.—cylinder dimensios in inches; Dri.—driver diameter in inches.

DIESEL NOTES: I—two-unit locomotive; D—dual control; S—steam generator for passenger service; M—multiple-unit control.

STEAM LOCOMOTIVES

Road Nos.	TE	Eng. Wt.	BP	Cyls.	Dri.	Builder	Dates
0-6-0 (Six-Wheel Switcher) Type							
254,261	45,500	169,000	230	21x26	52	Alco	1914,'15,'18
265,272							
303,305,328,333							
0-6-0T (Six-Wheel Shop Switcher) Type							
3293	27,000	142,000	165	19x26	52	Alco	1905
3297	33,000	184,500	165	21x26	52	Alco	1913
3298	36,500	184,500	185	21x26	52	Pittsburg	1913
0-8-0 (Eight-Wheel Swicther) Type							
3500-3507	56,500	221,500	190	25x28	53	Baldwin	1921,'23,'27
3509-3512							
3514,3516,3518-3528,3530,3531,3535-3554							
3555-3564	56,500	231,000	190	25x28	53	Lima	1929
3566-3569							
3572,3573							
3570,3571	56,500	231,000	190	25x38	53	Baldwin	1926
0-8-2 (Hump Switcher) Type							
3658,3685	75,000	294,000	225	28x30	63½	Baldwin	1911,'14
3687							
2-6-0 (Mogul) Type							
3715	42,500	177,500	215	20½x28	53½	Baldwin	1902
2-8-0 (Consolidation) Type							
719	35,000	192,500	200	20x28	57½	Rogers	1903
733	35,000	199,000	200	20x28	57½	Alco	1903
790	42,000	183,000	190	22x26	51	Cooke	1903
792	51,000	183,000	230	22x26	51	Cooke	1903
908	68,000	249,000	215	27x30	62	Baldwin	1909
2-10-0 (Decapod) Type							
3611,3615	90,500	325,000	225	30x32	64½	Baldwin	1911,'12,'14
3616,3617-							
3618,3619,3621,3623							
2-8-2 (Mikado) Type							
1203,1204	69,500	308,500	225	27x30	63½	Baldyin	1914,'18,'23
1297,1306							
1438,1648-1652,1655,1658,1659,1691,1693,1694,1697							
1205,1211	69,500	308,500	225	27x30	63½	Lima	1915,'16,'19,'23
1234,1244							
1262,1270,1285,1328,1360,1400,1409,1423,1442,1457,1634, 1635,1638,1639,1642-1644,							
1647,1660,1662,1664,1666,1668-1671,1681,1683,1686							
1674,1675	69,500	308,500	225	27x30	63½	Alco	1923
1680							
1509,1516,	75,000	308,500	225	28x30	63½	Baldwin	1914,'18,'23
1522,1524							
1529,1530,1536,1563,1589,1591,1593,1803,1806,1808							
1511,1518	75,000	308,500	225	28x30	63½	Lima	1915,'16,'19,'23
1521,1525-							
1527,1531,1537,1538,1543,1545,1548,1552,1555,1557,1564, 1570-1572,1579,1581, 1583,1585-1588							
1595,1596,1598-1602							
1523,1528	75,000	308,500	225	28x30	63½	Alco	1922,'23
1533,1541							
1574,1582							
2102,2109	90,000	336,000	225	30x32	64½	Lima	1916
2111,2113	79,000	336,000	225	28x32	64½	Baldwin	1911,'12,'14
2118,2128							
2130,2135							
2136-2138	90,000	336,000	225	30x32	64½	Baldwin	1912
2-10-2 (Central) Type							
2701,2702	96,500	404,500	240	30x32	64½	Lima	1920,'21,'23
2705-2706							
2708,2710-2713,2715,2717,2719-2728,2730-2733,2736-2747							
2750	104,500	417,500	260	30x32	64½	Lima	1921
2800-2819	104,500	416,000	260	30x32	64½	Lima	1920,'21,'23
4-6-2 (Pacific) Type							
1155,1196	48,500	285,500	215	26x28	75½	Alco	1916,'20
2034,2037	51,500	248,500	215	25x26	61	Alco	1907,'10-'13
2059,2065							
2069,2081,2087-2089,2093,2094,2096							
2099	69,000	248,500	215	27x30	61	Alco	1902

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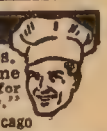

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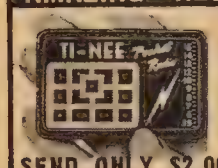

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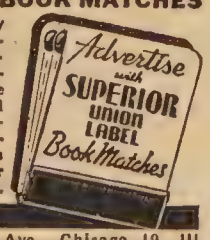

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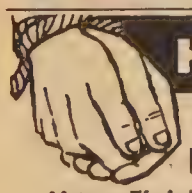

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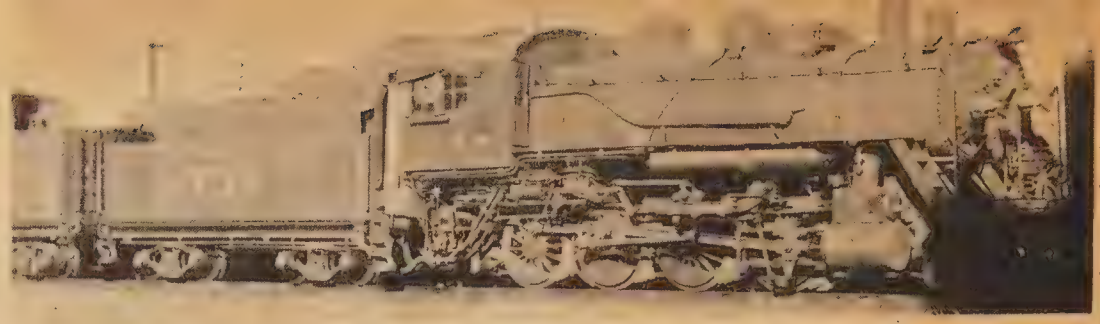
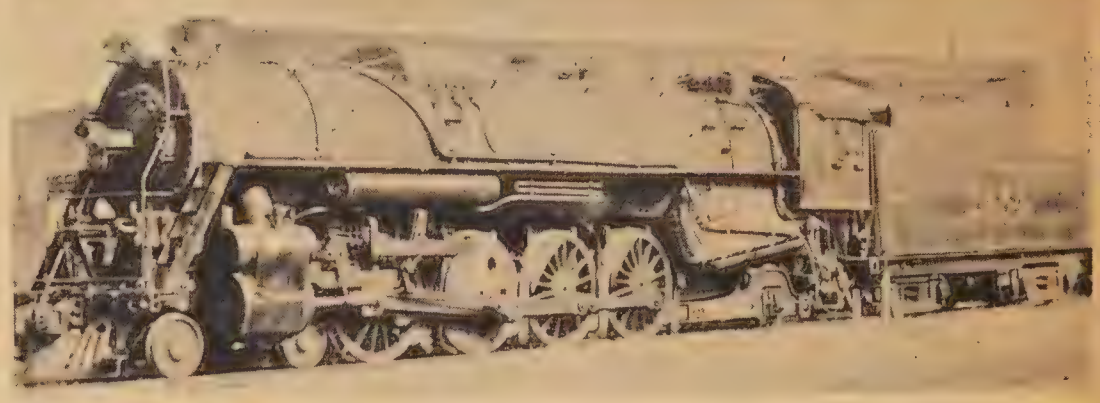


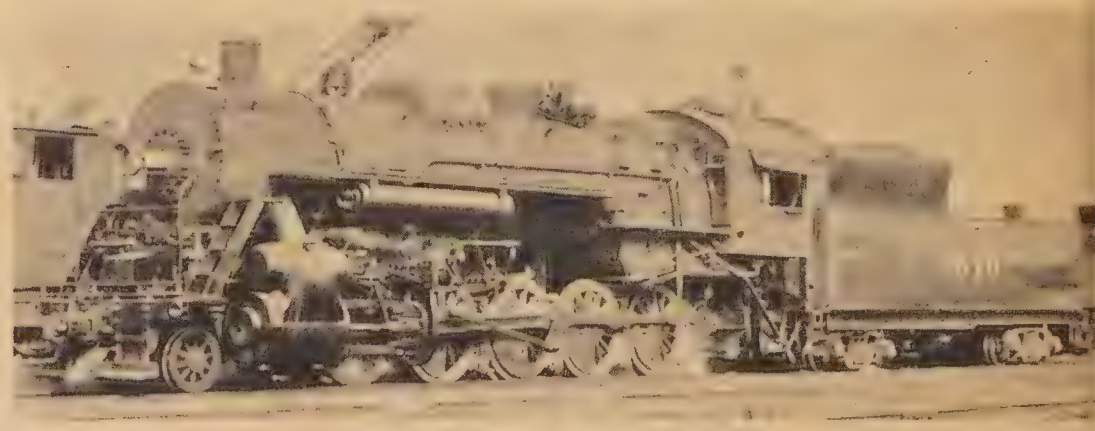


All IC photos by Sy Reich, 92 St. Marks Pl., New York City

Old Alco hand-fired jobs: 733, one of the last 5 IC 2-8-0's, and 2554. Diesels could do their work at less operating cost, but the steamers still carry on.

No. 2504 as constructed at the Illinois Central Railroad shops 20 years ago.

No. 2805, Lima vintage of 1920, is equipped with a BK stoker and circulators.



3612, Baldwin-built in 1915, is one of nine 2-10-0's on Illinois Central roster.

4-8-2 (Mountain) Type

2302,2305	70,000	384,500	260	28x28	73½	Lima	1925
2303,2304	70,000	384,500	260	28x28	73½	Alco	1923
2306							
2352	78,000	390,500	275	28x28	70	Lima	1925
2400-2403	66,000	276,500	245	28x28	73½	Alco	1923
2408,2410							
2414							
2405,2412	62,000	362,500	230	28x28	73½	Alco	1923
2411	60,500	362,500	225	28x28	73½	Alco	1923
2416,2418	66,000	376,500	245	28x28	73½	Lima	1925
2421,2423							
2426,2427,2429,2433,2436,2438							
2417,2419	62,000	376,500	230	28x28	73½	Lima	1925
2422,2424							
2425,2431							
2440,2445	62,000	376,500	230	28x28	73½	Alco	1926
2448,2452							
2453							
2441,2442	66,000	376,500	245	28x28	73½	Alco	1926
2446,2447							
2449,2450,2454,2458,2459							
2500,2502-	83,500	409,500	240	30x30	70	IC	1937,'40,'42
2514,2516-							
2521,2523-2525,2527,2528,2530, 2531,2536-2552,2554,2555							'50,'51,'52
2600-2619	83,000	424,000	275	28x30	70	IC	1942,'43

DIESEL-ELECTRIC LOCOMOTIVES

Road Nos.	HP	Builder	Bld. Mdl.	Whl. Arng.	TE	EW	Built	Notes
400	380	GE	44 ton	B-B	22,100	88,500	1947	
600-605	600	GM-EMC	SW-1	B-B	50,000	201,000	1939	
606-617	600	GM-EMD	SW-1	B-B	49,000	196,000	1946,'51	
1000	1000	GM-EMC	NW-2	B-B	62,500	250,000	1939	
1001,1002	1000	GM-EMD	NW-2	B-B	62,500	250,000	1940-'41	
1003-1016	1000	GM-EMD	NW-2	B-B	62,000	248,500	1945	
1026-1027	1000	GM-EMD	TR-2	B-B	62,500	249,500	1939	
1028,1029-							1945	
1030							1949	
1350-1351	1350	GM-EMC	TR-2	B-B	52,500	211,000	1941	
4001-4003	2000	GM-EMD	E-3	A1A-A1A	53,000	314,500	1941	
4004,4006-	2000	GM-EMD	E-7	A1A-A1A	54,000	322,500	1947	
4015,4016-		& GM-EMC					1946	
4017							1948	
4018-4021	2250	GM-EMD	E-8	A1A-A1A	54,375	323,000	1950	
4022-4025	2250	GM-EMD	E-8	A1A-A1A	55,000	325,000	1951	
4026-4031	2250	GM-EMD	E-8	A1A-A1A	55,125	327,500	1952	
4032-4033	2250	GM-EMD	E-8	A1A-A1A	55,500	329,000	1953	
4034-4036,	2400	GM-EMD	E-9	A1A-A1A	56,500	333,000	1954	
4037-4040							1956	
4101,4103	2000	GM-EMD	E-7B	A1A-A1A	52,125	309,000	1946,'48	
4104-4105	2250	GM-EMD	E-8B	A1A-A1A	54,000	322,000	1952	
4106-4107	2400	GM-EMD	E-9B	A1A-A1A	54,000	322,000	1956	
8800,8801	1500	GM-EMD	GP-7	B-B	63,000	252,500	1952,'53	DS
8850-8851	1500	GM-EMD	GP-7	B-B	61,000	244,500	1952	D
8900,8901	1500	GM-EMD	GP-7	B-B	63,000	252,000	1950,'51,'53	MS
8902-8911								
8950,8951-	1500	GM-EMD	GP-7	B-B	61,375	245,500	1950,'51,'52	M
8952,8953-								
8957								
8958-8981	1500	GM-EMD	GP-7	B-B	61,500	246,500	1953	M
9000-9041	1750	GM-EMD	GP-9	B-B	61,625	246,500	1954	M
9042-9047	1750	GM-EMD	GP-9	B-B	64,000	256,000	1954,'57	MS
9200-9219								
9048-9117	1750	GM-EMD	GP-9	B-B	62,000	246,500	1955,'56,'57	M
9118-9187								
9188-9199,9220-9257								
9300-9319	1200	GM-EMD	SW-7	B-B	62,000	248,000	1950,'52,'40	M
9326-9334,								
9335,9400-9429,9430-9464,9465-9484								
9375	1000	GM-EMD	NW-2	B-B	62,000	248,000	1940	M

Chicago & Illinois Western

DIESEL-ELECTRIC LOCOMOTIVES

101-103	1200	GM-EMD	SW-7	B-B	62,000	248,000	1950,'51
104							

Electric Passenger Equipment

Road Nos.	Type	HP	Seats	Length	Weight	Builder	Date	Convtd.
1100-1229	Motor	1000	84	72'—7½"	141,200	Pullman	1929	——
1230-1239	Motor	1000	84	72'—7½"	142,700	Pullman	1929	——
1301-1320	Trailer	——	84	72'—7½"	87,900	Pullman	1921	1926
1321-1345	Trailer	——	84	72'—7½"	87,900	Pullman	1924	1926
1346-1430	Trailer	——	84	72'—7½"	87,900	P-S	1926	——
1431-1440	Trailer	——	84	72'—7½"	87,900	P-S	1929	——

NOTES ON ELECTRIC EQUIPMENT: All cars coupled as motor-trailer combination semi-permanently with GE PC-102 D1 controls at each end. All motor cars equipped with four motors—1100-1166; 1230-1239 4 GE 285; 1167-1229 4 WH 587D-5. All cars have Commonwealth cast steel trucks, motors have 38-inch steel wheels, trailers 33-inch steel wheels. Inside length of passenger compartment is 60 feet. All cars have electric heat.

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RAILROAD HOBBY CLUB

by Sy Reich

THIS question often crops up, "Why doesn't *Railroad Magazine* use slick paper as *Trains* does?" It's a fair question. *Trains* gives you a fine grade of paper. On the other hand, *Railroad* offers you 16 more pages per issue than you'll find in *Trains*—and 16 large pages carry a whale of a lot of material! *Railroad* also has full-colored front covers. Finally, *Railroad* gives you free service in the *Switch List* and *Model Trading Post*, the kind of service for which *Trains* charges you 10 cents a word in advance.

Sy Reich

* * *

"I am no longer curator of the Railway & Locomotive Historical Society, a job I held for 30 years," writes John W. Merrill, Kearsarge, N. H. "The Society's entire collection of photographs and other railroadiana has been moved from Boston as a permanent loan to the museum of the Edaville Railroad, South Carver, Mass., of which I am now director."

* * *

The following question comes from L. I. McDougle, special representative, Association of American Railroads, Transportation Bldg., Washington 6, D. C.: Who can supply a list of diesel locomotive speeds of 100 mph. or over?

* * *

A free copy of *America and Its Railways*, a new folder designed for enclosure with correspondence, etc., may be obtained from the AAR at the above address. Same applies to *The Railway Mail Story*, 20-page booklet, including a chronology of milestone in railway mail history, and *The Railroad Story*, 31-page booklet filled with up-to-date information on science, research, and railroad progress.

A 20-page picture booklet, *Night Trick on the Norfolk & Western*, including a reproduction of O. Winston Link's prize-winning photo of a time freight pounding through Luray, Va., will be given free on request to Norfolk & Western Railway, Magazine & Adv. Depts., Roanoke 17, Va.

Also gratis is a new 8-page illustrated brochure, *This Is the Chicago & Eastern Illinois Railroad*. Write to the road's General Offices, 332 S. Michigan Ave., Chicago, Ill.

* * *

Six photos of traction subjects were found in a New York Central train between New York City and Harmon last summer by Peter P. Bretz, 3540 Centinela Ave., Los Angeles, Calif., who will give them to anyone who proves ownership.

* * *

Information about railroads of Spain may be obtained from Jesus de la Fuente, public relations manager, Red Nacional de los Ferrocarriles Espanoles, Departmento Comercial, Paseo Del Rey, Edifico B, Madrid, Spain.

STEAM POWER

ALTHOUGH Eastern U. S. A. and most of Canada remain strongholds of the iron horse, other regions also boast steam operation. In Ohio, Indiana and Illinois, the Nickel Plate still operates steam of the 0-6-0, 0-8-0, 2-8-0, 2-8-2, 2-8-4 and 4-6-4 wheel arrangements—151 of them as of August 1, 1957. (NKP roster in next issue.)

Our December issue featured Union Pacific roster, still rich in steam power. During the recent wheat rush 3800's, 3900's, and 800's wheeled the grain in Nebraska and Kansas, with sturdy 2-8-0's switching in the yards. The Big Boys (3900's, 4000's, 800's) are still busy in Wyoming.

The Burlington reports 85 steamers on its Lines East and 33 on Lines West, distributed as follows: Galesburg-Ottumwa-Creston: one K2, 5 S4, one S4A, 16 O1A, 25 O5A, 8 M4A; Beardstown: 19 O1A, 10 M4A; Lincoln-Omaha-Wymore: one G5A, one G1O, one K4, one S4A, 2 S4B, 14 O1A, 5 O3, 2 O5A, 6 O5B; Colorado & Southern: one O4. Practically all are stored dead.

The Illinois Central has 395 steamers of 11 different wheel arrangements, many sub-classes (compared to 524 diesel units). Many are still running, with the largest concentration in southern Illinois and Kentucky. Most operation centers about Paducah, Ky., a steamfans' paradise (nary a diesel operates in this territory) and includes Carbondale and Centralia, Ill., and

Louisville, Central City, and Princeton, Ky. During one day at Paducah you can see 50 live steamers and an equal number of stored engines.

Here's the steam list for Alabama, mostly industrials. Who can add to it?

Alabama Asphaltic Limestone Co., Margerum: one 0-4-0T, one ex-SOU 2-8-0
Alabama Marble Co., Sylcauga: one 0-4-0T
Birmingham Slag Co., Woodward: one 0-6-0
Alabama By-Products Corp., Birmingham: two 0-6-0's
Alabama Central RR, Jasper: one 2-8-0; Marigold: one 2-8-0, one 4-6-0
Cheney Lime & Cement Co., Allgod: two 0-4-0T's, n.g.
DeBardeleben Coal Corp., Holt: one 4-6-2; two 0-8-0's
Gulf States Paper Corp., Holt: two 0-6-0's
Chattochhee Valley RR, Lanett: one 2-8-0
T. R. Miller Mill Co., Inc., Brewton: one 2-6-2, one 2-4-2T, one other steamer
Mobile & Gulf RR, Brownville: one 2-6-0
Mobile River Saw Mill Co., Mt. Vernon: one 2-6-2
Montgomery-Roquemore Gravel Co., Montgomery: one 0-6-0, two 0-4-0T's
Pullman-Standard Car Mfg., Bessemer: two 0-6-0T's, one 0-4-0T out of service
Republic Steel Corp., Birmingham: one 0-6-2, two 0-8-0's, five 0-6-0's
Sumter & Choctaw Ry., Bellamy: one 2-6-2, one 2-8-2
Tenn. Coal Iron & RR Co., Ensley: 12 saddle-tanks
Twin Seams Mining Co., Kellerman: two 3-T Shays
U.S. Pipe & Foundry Co., Birmingham: one 2-8-0, one 0-6-0, one 0-6-0T
Woodward Iron Co., Woodward: three 2-8-0's, two 2-8-2's, one 2-10-0
Republic Steel Corp., Alabama City: one 0-8-0, three 0-6-0's.

* * *

In our last issue we started a list of steam locomotives operating today on amusement-park railroads. Add to this list the 14-inch-gage engine, brass-bound in Southern livery, that runs on Boulder Park RR., at Indian Falls, Boulder Park near Akron, N. Y., just off Route 77.

Data for steam lists comes from John Bucklin, Norton Clark, Richard Gibbons, Tim Kaufman, Bill Kessel, Thomas Lawson, Jr., LeRoy Palmer, Bill Russell, Jim Schoenbein, and your *Hobby Club* editor.

* * *

"Although the *Pocket List of Railway Officials* says the Virginian has only diesel and electric power," writes "Candy" McCarthy, 420 Boonville St., Springfield, Mo., "I saw six Virginian steam engines at Roanoke last summer standing idle. They are Nos. 212 (4-6-2), 244 and 252 (0-8-0), 507 and 508 (2-8-4) and 903 (a huge 2-6-6-6)."

* * *

"While on vacation recently I saw the last Shay and Climax engines left in New England," writes Robert Frischmuth, 31 Ogden Ave., Peekskill, N. Y. "Both are on display at Clark's Trading Post near North Woodstock, N. H."

The list of steam locomotives left in New England includes:

New Haven Railroad (Readville, Mass.; Providence, R. I.; New Haven, Conn.): three 4-6-2's
Eastern Gas & Fuel Associates, Everett, Mass.: ten 0-6-0's and 0-8-0's
Boston & Maine, Charlestown, Mass.: one 0-8-0
Rock of Ages Quarries, Graniteville, Vt.: two 0-6-2T's, one 0-6-0
New Haven Trap Rock Co., North Brandford, Conn.: two 0-4-0T's
Norton Grinding Co., Worcester, Mass.: two 0-6-0T's
Wickwire Spencer, Palmer, Mass.: one 0-6-0T
Bullard Machine Co., Bridgeport, Conn.: one 0-4-0T
Fletcher Quarries, Forge Village, Mass.: two 0-6-0's

RAILROADIANA

ITEMS in this section are printed free, in good faith, but without guarantee. Write plainly. Word limit 28, except entries dealing with back numbers of our magazine. Address Sy Reich, *Railroad Magazine*, 205 East 42nd Street, New York 17, N. Y.

Use abbreviations. For example, *tts.* (public timetables) and *emp. tts.* (employes' operating timetables).

If you wish to be listed as desiring pen pals you must state which phases of railroading interest you most.

SWITCH LIST

R. G. ALLERMANN, 9477 Monte Vista Ave., Ontario, Calif., trades size 3½x5 color negs. of LATL for CTA; sells color pix 3½x5 UP Aerotrain.

DICK ANDERSON, 334 S. Prindle, Arlington Hts., Ill., sells size 116 negs. diesel, steam, elec., trolleys. No list; state wants.

PHIL BEACH, 1101 Campus Pkway., Seattle, Wash., will buy March '41 Trains, good cond.

DICK BALTULIS, Box 367, Waltham, Mass., wants lists of railroadiana for sale to be used in rr. museum.

AL BERNER, 28 Lancaster Ave., Baldwin, N. Y., sells p.c. size elec. lines pix. List for stamped env.

TOM BOLD, 5687 Miles Ave., Oakland, Calif., will buy Sacramento N. pix, emp. tts., info.

W. BROSCHART, 132 E. Marie St., Hicksville, N. Y., buys, sells, trades all kinds transp. pix during 1920's.

JOE BRUNER, Box 47, E. Marion, N. C., sells Sou., UP CNJ, GTW tr. and engine pix. Details for 3c stamp.

EUGENE BUCKLEY, Jr., 2099 New York Ave., Brooklyn, N. Y., trades Bklyn. subway, bus pix, transfers. Info. for 3c stamp.

JIM BURCHARD, Box 293, E. Haven, Conn., sells 10 Sacramento N. pix, size 6x10, $10.

JIM BUSCHE, 1448 Indiana Ave., Connersville, Ind., sells and trades rr. emp. mags, tts., literature. List for 3c stamp.

HERB CEARLEY, 706 W. Caldwell, Compton, Calif., will sell 35mm. slides PE, 616 size SP steam negs., back issues Railroad Magazine.

NORTON CLARK, 29 Richardson St., Newton, Mass., buys 35mm. slides B&A steam locos, G&U, Worcester St. Ry., United Elec., Conn. Co.; also frt. trolleys anywhere.

C. J. CLARY, ACL Fireman, 314 State St., Wayross, Ga., will sell brass no. plates from Sou. 4-6-2 1377, 2-8-2 4860.

DOUG CUMMINGS, 8070 Oak St., Vancouver, B. C., Canada, sells and trades negs., pix, many rds. New list 10c coin. Wants negs., pix, rosters, Can., West U.S. rds.

LU CUMMINGS, Jr., 129 Nevin St., Lancaster, Pa., buys, sells, trades size 116, 620, 3½x5 pix trs., trolleys, buses. Wants pix Pennsy. FF-2.

W. C. CUTHBERT, 195 N. Nevada Ave., Littleton, Colo., sells Off. Guide, DSP&P spikes, Colo. auto license plates.

STAN CZAJKA, 600 Maddock St., Crum Lynne, Pa., will sell set of Baldwin 3¼x4 black and white lantern slides.

OWEN DAVIES, 1214 LaSalle St., Chicago, Ill., sells back numbers Railroad Magazine, Trains, railroadiana. Big list free to anyone specifying his interests.

SAM DERMENGIAN, 318 Cherrywood St., W. Covina, Calif., will buy rr. jewelry, buttons, switch keys, medals, miniatures.

P. W. DUNCAN, R. No. 1, Trinway, O., wants any size pix N. Ohio Trac. & Light Co. property and equip't. Write first.

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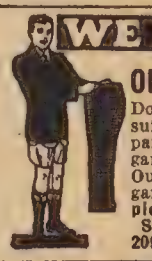

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NORMAN GIDNEY, 2621 E. 29th Ave., Vancouver, B. C., Canada, will sell size 116 pix CPR, CNR, GN, NP, Milw., UP, steam, diesel, elec., BCE cars, logging rds., ships, 12 for $1; no trading.

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LLOYD KEYSER, 130 23rd St. Dr., SE, Cedar Rapids, Iowa, wants pix, plans C&NW class A 4-4-0 No. 91 or other of same class.

DON KISSUK, 36 Thompson St., Princeton, Ill., wants color pix size 116, 8x10 CA&E, MTA, LVT.

ROGER KRUEGER, 1936 Brigden Rd., Pasadena, Calif., wants any size SP steam negs.

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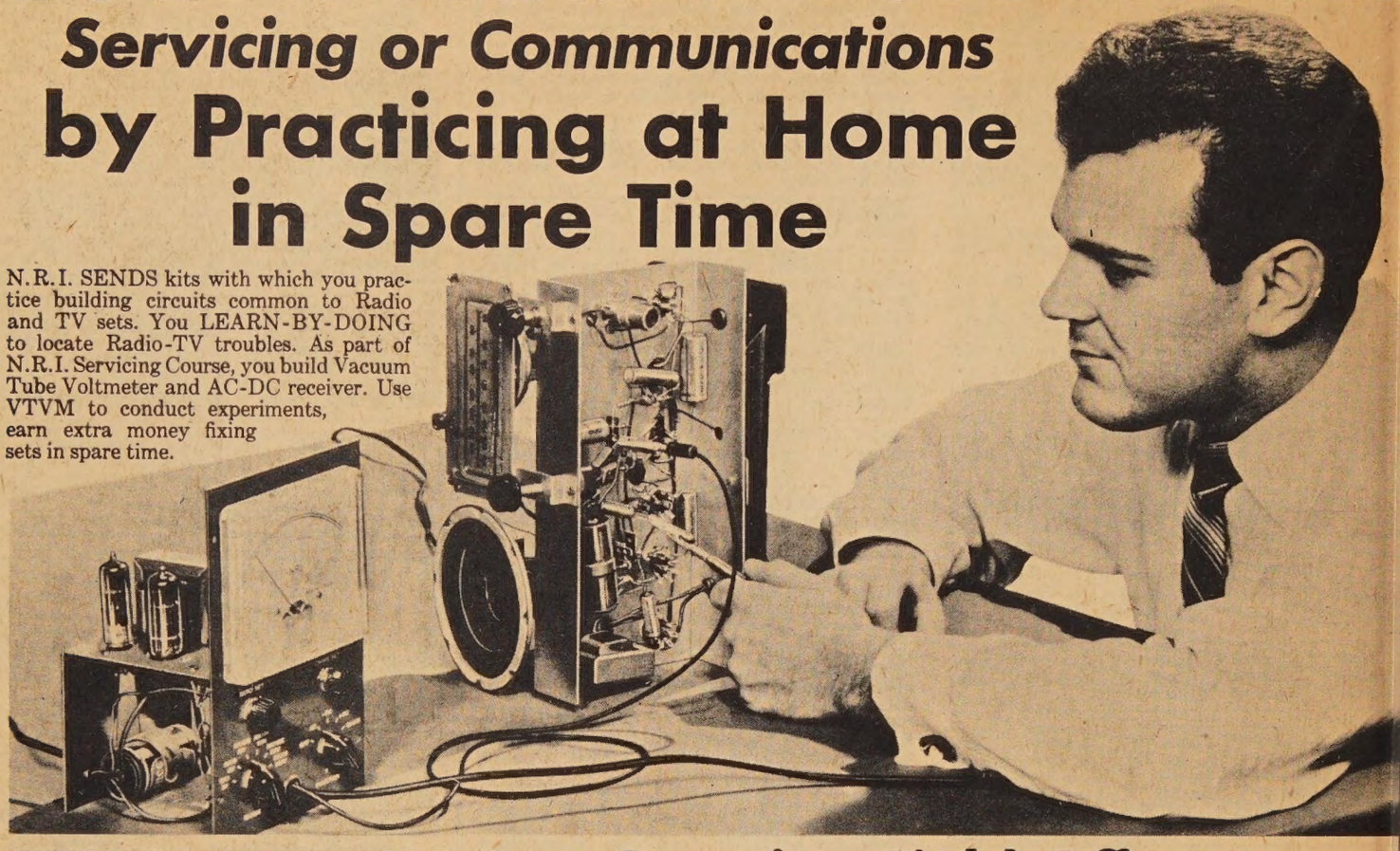

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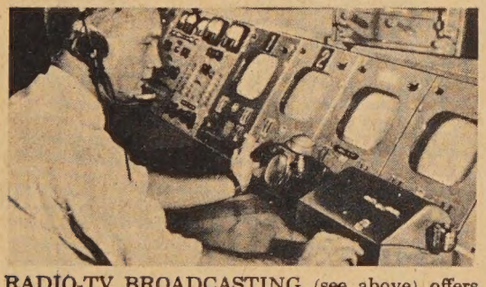

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Training PLUS opportunity is the *ideal combination* for success. So plan *now* to get into Radio-TV. The technical man is looked up to. He does important work, gets good pay for it. Radio-Television offers that kind of work. NRI can supply training quickly, without expense of going away to school. Keep your job while training. You learn at home in your spare time. NRI is the OLDEST and LARGEST home study Radio-TV school. Its methods have proved successful for more than 40 years.

Added Income Soon - $10, $1[5] a Week in Spare Time

Soon after enrolling, many NRI student[s] start to earn $10, $15 a week in spare tim[e] fixing sets. Some pay for their training an[d] enjoy extra luxuries this way. Some mak[e] enough to start their own Radio-TV shop[s] NRI training is *practical*—gets quick result[s] Easy to understand, well illustrated lesson[s] teach you basic principles. And you LEARN BY-DOING by practicing with kits of equip[-] ment which "bring to life" things you stud[y]

Find Out What NRI Offers

NRI has trained thousands for successf[ul] careers in Radio-TV. Study fast or slow—[as] you like. Diploma when you graduate. Ma[il] coupon now. Paste it on a postcard or mail envelope. ACTUAL LESSON FREE. Also [a] page catalog that shows opportunities, show[s] equipment you get. Cost of NRI courses lo[w] Easy terms. **NATIONAL RADIO INSTITUT[E] Dept. 8-AR4, Washington , D. C.**

N.R.I. TRAINED THESE MEN FOR SUCCESS

"I was repairing Radios by 10th lesson. Now have good TV job." M. R. LINDEMUTH, Fort Wayne, Ind.

"Doing spare time repairs on Radio and TV. Soon servicing full time." CLYDE HIGGINS, Waltham, Mass.

"I had a successful Radio repair shop. Now I'm Engineer for WHPE." V.W.WORKMAN, High Point, N.C.

"There are a number of NRI graduates here. I can thank NRI for this job." JACK WAGNER, Lexington, N. C.

VETERANS Approved Under G.I. Bills

SEND FOR BOTH FREE

National Radio Institute
Dept. 8-AR4 Washington 16, D. C.

Mail me Sample Lesson and 64-Page Catalog FREE. (No salesman will call. Please write plainly.)

Name_____ _____Age___

Address_____

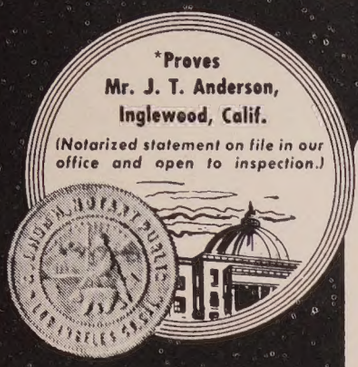
City_____Zone___State_____.

Accredited Member National Home Study Council

New **PROFIT-PROVEN*** Home-Business!

"I make $400.00 a week!"

*Proves
Mr. J. T. Anderson,
Inglewood, Calif.
(Notarized statement on file in our office and open to inspection.)



***MAKE BIG MONEY, TOO**—printing without a printing press! Learn the secrets of this new MIRACLE PRINTING METHOD . . . build a Big-Pay Business, SPARE or FULL-TIME, right in your home. Never before has there been such a golden opportunity to turn pennies into dollars in profit! – to build a successful, prosperous future easily, quickly, and enjoyably- AT HOME!*

WHAT IS SCREEN PRINT? It's a new, fascinating technique – so amazingly simple and economical it may soon revolutionize the printing industry! Imagine – after only a few short days, you may print many beautiful professional jobs for LESS THAN IT WOULD COST ON A $5000 PRINTING PRESS!

SCREEN PRINTING IS FUN . . . EASY! If you like to work with your hands and make beautiful things, you'll find no Home Business that provides greater enjoyment, relaxation, and PROFIT. You'll enjoy every moment . . . creating beautiful printed material that may sell for really BIG MONEY!

NO EXPERIENCE OR COSTLY EQUIPMENT NEEDED! Few home businesses offer such BIG PROFITS for *so little* time, money or training! You *don't* need art ability, expensive equipment, or previous experience! You start at home with little or NO OVERHEAD. Yet you can print – almost immediately – on PAPER, GLASS, LEATHER, CLOTH – ANYTHING! Work with all colors, even the vibrant new FLUORESCENT "Glow Colors" that are in such big demand in advertising circles! It's amazing – but true!

START SPARE TIME—ON A "SHOESTRING"! Use your spare time to earn up to $12.50 per hour, *right from the start*. Earn 2 INCOMES INSTEAD OF ONE. Print in your garage, basement, spare room–*anywhere!* Screen Printing requires little space – won't interfere with your household set-up.

Later, when you see the TREMENDOUS PROFITS to be made, you may wish to make Screen Printing your full-time occupation. Become your own boss – make BIG MONEY! Others are doing it – why can't you?

HELP FILL THE HUGE, GROWING DEMAND! Businesses in every city, every community have learned – almost "overnight" – of the amazing quality and economy of MIRACLE Screen Printing! *You* save them up to 50% on many jobs – yet *you make up to 300% profit!* When the word gets around people *come to you* – no selling necessary! Because this sensational printing discovery is so new, many Screen Printers *sell exclusively by mail!*

WE SUPPLY EVERYTHING YOU NEED! Every secret, enough materials to start making money almost immediately can be yours! Never before has such a wonderful "profitunity" been offered to anyone desiring to start a profitable spare or full-time business of his own! We guide you every step of the way with our Personal Counseling Service & Home Business Plan . . . explain how we have helped others, and how we can help *you*, too! All the CONFIDENTIAL, money-making facts are yours if you MAIL COUPON today – while there's still time for you to get in on the ground floor.

and READ what others are saying about Screen Print

"My first attempt at Screen Printing netted me $40.00."
J.R., Canada

"I would not take $1,000 for it right now. Just what I have been searching the world over for"– C.S., Nevada

"Wonderful new method...made $80.00 first week...swamped with orders."
R.T., Florida

"Screen Printing is nothing less than fascinating"
S.M.D., Mass.

©1957 SCREEN PRINT TRADE MARK REG.

PRINT WITHOUT A PRINTING PRESS!
OR ANY SPECIAL EQUIPMENT

PRINT Beautiful CLOTH, FABRICS, GLASS JARS, NOVELTIES, etc., *at home!*

MIRACLE Screen Print lets you print on *all* surfaces, all materials—*a big advantage* over regular print shops. You provide a service offered only by Screen Printers — may have the entire field to yourself!

PRINT expensive Posters, Banners, Labels, Signs, *at home!*

Realtors, Political Candidates, business firms, many are discovering that Screen Printing is the best answer to their needs. Be the first in your area to fill the huge demand!

PRINT Colorful ADVERTISING DISPLAYS *at home!*

Stores, markets, gas stations, theaters—all businesses need eye-catching displays. Ordinary printers simply can't compete, price-wise, with Screen Printers, on many jobs!

FREE!
DETAILS AND ACTUAL SAMPLES
Just Mail card below
WE PAY POSTAGE

FREE!
Just print your name and address on card and drop it in the mail!
NO POSTAGE NECESSARY!

HERE'S WHAT YOU RECEIVE:

COMPLETE REVEALING DETAILS on this new Amazing Printing discovery, Proven **BIG-MONEY OPPORTUNITY PLAN,** Actual Authentic **SAMPLES,** and large illustrated **"HOW TO" BOOKLET.** Rush the Business Reply card today and all this will be mailed to you.

WANTED *over 876 Men and Women*

YOU CAN QUALIFY IF: **1.** You have a place in your home or someplace else in which you can do Screen Printing. **2.** If you have some spare time available. **3.** If you wish to learn an amazing new process of printing that may bring you Big Profits almost overnight. **4.** If you are 18 years or older. If you can answer these four questions "yes" then we want you. Rush card today!

Cut on dotted line.

FROM
NAME _____
ADDRESS _____
CITY _____ STATE _____

FIRST CLASS PERMIT
NO. 20091
Los Angeles, Calif.

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in the United States

4¢ — POSTAGE WILL BE PAID BY —

SCREEN PRINT CO.
15127 S. BROADWAY
LOS ANGELES 61, CALIF.
Dept. 501

Cash In Quick On New Shoe Craze!

We'll set you up in a Money-Making Shoe Store Business FREE! Just 8 Easy Orders a Day bring you up to $960 a month!

Want Plenty of Money? Just show young men, college or high school students America's newest, hottest shoe craze . . . Mason Kampus King. They go wild over colorful school letter or personal initial right on each shoe. You take easy orders —collect cash deposits—get big Bonuses and Prizes every month you work spare time or full time.

121 Exciting COLOR COMBINATIONS

Your customers choose from 121 different combinations of colors and letters. Ideal for schools, colleges, fraternities, bands, etc.

Mason Men have made big money for half a century—but now a whole new market is open to them. This exciting new shoe style can be your private "gold mine". No wonder the Kampus King sells on sight to organizations, marching units, students, and "hep" individuals. No wonder your first sale will start such an "endless chain" of sales and profits, because this is the kind of NEW IDEA young folks go for BIG!

You Offer 210 Fast-Selling Shoes and Jackets—Something for EVERY Man and Woman

Yes, here's a wonderful business for you, if you want to make really important money with a line you can sell to everybody—if you want steady cash profits every month. And you never invest one cent—we furnish everything FREE, so you can start raking in profits your very first hour! No rent to pay—no light bills, clerk hire or other overhead. You keep 100% of your profits!

Here's PROOF:

Ambitious man wanted in every town, to earn this kind of money! James Kelly took so many orders for these Nationally Advertised shoes he made $93.55 in ONE EVENING! Fred Mapes makes $5.00 to $10 every hour he devotes to his Mason Shoe Business. Charley Tuttle averages over $80 extra weekly in part time. How much do YOU want to make? It's up to YOU!

Stores Can't Compete

People PREFER to buy from you as the local Mason Shoe Counselor. You offer at-home or at-work convenience no store can match. Your customers get the size they want, because you draw on stock of over 250,000 pairs of dress, work, sport shoes in sizes from 2½ to 15—widths from extra-narrow AAAA to extra-wide EEEE. Famous Air-Cushion insole shoes give supreme comfort, so you get plenty of repeat orders and recommendations.

You make a LOT of money with amazing Ripple Sole shoes with revolutionary new kind of sole that has shock-reducing *gliding action*—forward thrust with every step.

EVERYTHING FURNISHED FREE!

We'll furnish your complete Starting Outfit FREE! Just rush coupon. It brings you—FREE and POSTPAID—*everything* you need to take profitable orders for Kampus King Shoes—sensational Ripple Sole Shoes—insulated Jackets & Boots—Sylflex Shoes—work shoes —210 in all! You can start with Mason in Spare Time, switch over to full time when you like. Get your own and family's shoes wholesale! You can't go wrong—so send the coupon now!

INSULATED Jacket-Boot Combinations

Warm, INSULATED jacket-and-boot-combinations make a tremendous hit with outdoor workers, sportsmen—make big chunks of extra cash for Mason salesmen. Women's jackets as well as men's now multiply your opportunities with this fine FREE line.

Every factory worker, postman, policeman, garage and service station man is your prospect with Mason's complete line of sturdy, long-wearing, super-comfort WORK SHOES, which can be worth as much as $45 extra weekly, beside your regular profits from your mens' and womens' dress shoe business.

MASON SHOE MFG. CO.

Dept. 929, Chippewa Falls, Wisconsin

FREE SELLING OUTFIT

Mr. Ned Mason
Mason Shoe Mfg. Co., Dept. 929,
Chippewa Falls, Wisconsin

OK, Ned! I want to make extra spare time money fast—up to $960 a month for 8 orders a day. Rush EVERYTHING I need to start—FREE and POSTPAID!

Name.....

Address.....

Town.....State.....